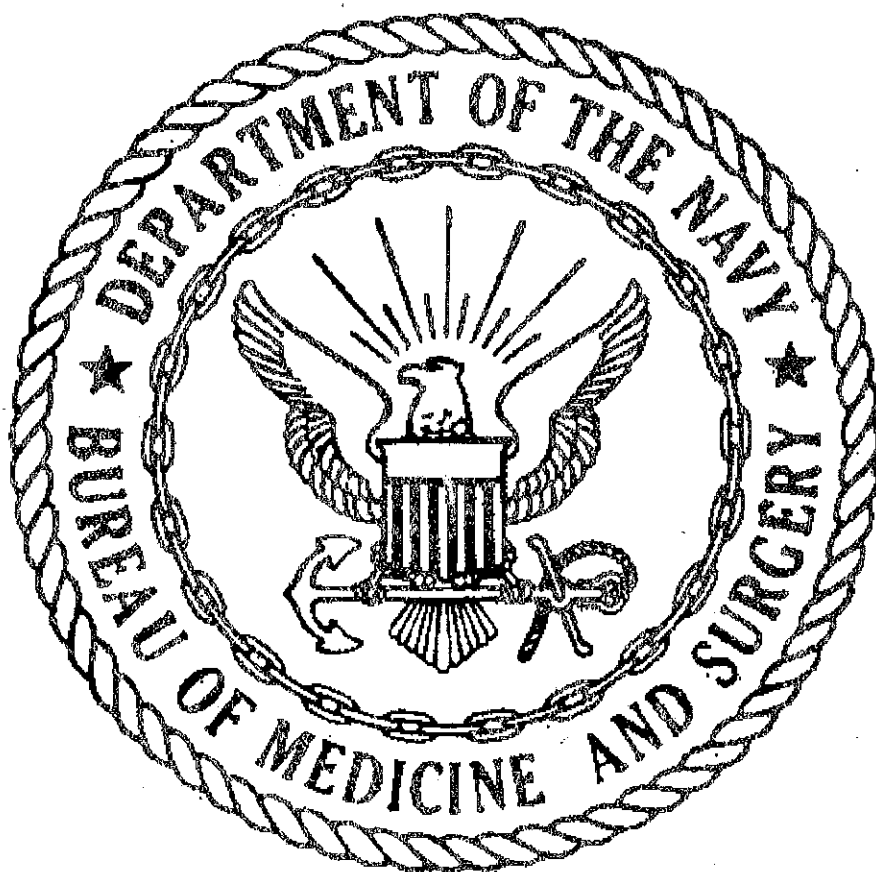


PLANNING FRAMEWORK
FOR
NAVY MEDICINE



VERSION 1.1

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OVERVIEW I - WHY DO HEALTH CARE PLANNING?

A. INTRODUCTION. Health care planning is not a "new" discipline or a "new" focus for the Navy. Most of you learned the basic process as part of your baccalaureate and masters degree course work. The vast majority of you have always used a logical method for determining what health care services were needed by your beneficiary population and how best to provide those services. Both catchment area and BUMED planners identified one basic problem with health care planning in the Navy: we don't all use the same framework, data, methods. This has become a real problem, especially with the implementation of coordinated/managed care. Many of you have been asking for a "how-to" type of manual. In addition, headquarters planners need to have everyone using the same framework, data, and methods so they can make system-wide comparisons and impact analyses. That's how the idea for this manual was born. What we hope you will find is a standardized framework which uses standardized data sources and methods, yet which incorporates the capability for inclusion of and customizing for locally-unique factors.

Coordinated/managed care requires a systematic approach to planning for health care delivery to our beneficiaries. We know we probably cannot provide all the required health care services at our own MTF or clinics so we need to know what other options are "out there" for our customers. CHAMPUS? PPOs? Should we consider a cooperative arrangement with the Air Force hospital for lab work or x-rays? Could the local VA hospital help out with acute care if we do their CAT scans? What will happen if the Army hospital closes - how many people will we have to add to our service area population, and what services will they require? Would our customers prefer a Saturday hypertension clinic? Which provider type would most women prefer to do their GYN exams and PAP smears? What type of services should we be providing to assist our active duty to maintain their level of health and readiness for war? What is more cost-effective: cleaning the linen inhouse or contracting for it or arranging a "swap" with the VA for a service they need? Catchment area health care planners can bring everything into focus, with a logical, standardized approach to health care delivery which will benefit all our customers and providers.

B. SYSTEM-WIDE HEALTH CARE PLANNING (TOP DOWN). Health care planners at BUMED are constantly looking at ways to optimize the system. The goal is to make our system as effective and functional as possible, balancing the health care requirements of our beneficiaries with the realities of resource constraints. Optimizing the system seldom means optimizing every sub-unit (MTF) of the system. This means BUMED planners need to know your requirements but will not be able to please everyone. The Health Care Planning Process presented in this manual will also be used by BUMED planners. Their concerns are more global and "macro" than catchment area planners. For example, they will seek solutions to all base closures, all homeporting changes, all fluctuations in contracting dollars. They will determine the most appropriate placement for ever-decreasing military billets and civilian positions.

C. CATCHMENT AREA HEALTH CARE PLANNING (BOTTOM UP). If you are reading this manual, you already are probably doing health care planning for your catchment area. Coordinated/managed care requires that the scope of your health care planning extend beyond the confines of your hospital and its clinics. Accordingly, this manual will refer to you as a "catchment area" planner. Even if your MTF is not scheduled for implementation of coordinated care this year, catchment area planning makes good sense. Navy Medicine is no longer in a "growth mode". We have to find innovative, creative, and workable solutions to the problem of delivery of health care services to our beneficiaries. It is critical that we get out of the "seat of our pants" mode of operations and rationalize what we do, and why we do it. Congress is insisting on data and analysis in support of all our policy decisions, and our customers deserve the very best we can provide. Previously, we didn't have to put a price tag on what we did - we just did it, and let someone else worry about the bill. As you know, those days are over. This may be a major change of focus for some people who still believe that only Navy personnel should provide health care to our beneficiaries because no one else can do it as well. This is naive thinking. We have demonstrated that civil service, contract, and partnership personnel can be important members of the Navy health care family. We are not going to gain more active duty billets in the foreseeable future. It makes sense for planners to pro-actively examine all possibilities so we can continue to offer the same quality and quantity of health care services.

Planners need to determine just what health care services our customers require and the most effective and efficient way to provide access to those services. In the near future, we may not be able to provide all the required services inhouse, except in isolated or OCONUS locations. The goal will be to provide inhouse the services that we are able to provide more effectively (e.g. flight line stand-by's) and/or more economically than other alternatives. The challenge will then be to find cost-effective ways to provide convenient and effective access to other alternatives for the other required services.

D. INTERFACE BETWEEN SYSTEM-WIDE & CATCHMENT AREA HEALTH CARE PLANNING. Naval health care planning has to be bottom-up and top-down. Catchment area planners need information about policies and the Big Picture from system-wide planners. System-wide planners need information about customer expectations, MTF capabilities, and viable health care alternatives from catchment area planners. Using a common framework, both sets of planners can work more effectively as a team to estimate requirements for services, distribute scarce resources, and evaluate alternatives. Health care planning for the catchment area is best done at the catchment area level, with BUMED assistance and guidance. System-wide planning will become more effective as BUMED planners gain more information and understanding of the realities and capabilities of each catchment area.

E. EXPECTED END-PRODUCTS & USES OF THE CATCHMENT AREA HEALTH CARE PLANNING PROCESS. Several types of data are essential for effective planning. These include demographic information about various segments of the population served; detailed information about clinical services capabilities inhouse and within the catchment area; and environmental trends within the catchment area, Navy, and health care system. The standardized planning process is expected to enable catchment area health care planners to obtain, organize, and update baseline information about their hospital and clinics, and their catchment area. Some of the requirements of our customers can only be accomplished with Blue Suit (Navy) health care providers. Operational units, for example, on ships, with air squadrons, attached to Marine units, are clear examples of situations where a uniformed physician, nurse, or corpsmen cannot be substituted with a civilian provider. One of the new challenges facing Navy health care planners is to determine the actual Blue Suit requirements. What is so Navy-unique about the service provided, or the setting in which it is provided, that only a uniformed person can do the job? The standardized planning process is expected to enable catchment area health care planners to determine the "real" Blue Suit requirement, using criteria furnished by BUMED. In the past, the Navy uses historical workload data for planning and for forecasting utilization of services. However, health care use behavior is more complex. People have specific needs for services. These are determined by the community and/or clinicians. People also have specific desires, wants, expectations for health care services. People also engage in specific behaviors, i.e. show up for sick call, phone for appointments. Finally, we as a health care delivery system, provide specific services to those who seek health care. What is the "real" requirement for services? The standardized planning process is expected to enable catchment area health care planners to estimate the health care services requirement for the current and projected population.

Make/buy decision-making is an vital component of health care planning as well as for management of coordinated/managed care operations. Accurate and current data are essential for making informed and optimal make/buy decisions. The standardized planning process is expected to enable catchment area health care planners to have the necessary data and methods for accomplishing make/buy operations. Those of you who are Navy health care planners have an exciting challenge ahead. You will be pioneers into new territory, frightening to some, exhilarating to others. Coordinated/managed care will break many of the old paradigms about how we do business, but at the end of the process, we expect to have a more efficient and effective way to meet the requirements of our customers. The standardized planning process is expected to provide catchment area health care planners with a framework for accomplishing the various components of coordinated/managed care.

F. PURPOSE OF THIS MANUAL. This manual is designed to give you, the catchment area planner, the information you need to do your job. We want you to let us know if it accomplishes that goal, and if not, what tools or methods we need to add to the manual. We don't expect to have designed the perfect manual right now. Even as you read this, policy planners throughout DoD are working to perfect better data collection methods, better databases, better technology, better ways to evaluate options. Policy-makers continue to define the benefit, determine Blue Suit requirements, estimate draw-down impacts, examine health care delivery options, evaluate GME, etc. Therefore, we would like you to view this manual as a set of modules. As we get better at something, we'll just pull out the old module, and replace it with the new and improved module. In this way, this manual will never become outdated or lose its usefulness. We look forward to all your suggestions.

TAB A - STEPS IN THE PLANNING PROCESS

The planning process has a number of steps which are outlined below and discussed in detail in subsequent section of this document. As you will read, some steps are better defined in terms of tools, data source, and future developments. Our purpose is to take the best of what is currently available and to modify sections in the process as new more update material presents itself. Therefore, updates and reassessments will be mad on a continuous basis. Your initial response and evaluation of this document will provide a basis for continued improvement.

STEP 1 - Identify the Planning Issue. The planning issue may be very broad or very specific. When identifying the issue there should be an understanding of its relationship with other broader, more defined issues, an identification of possible trade-offs involved, and any known constraints.

STEP 2 - Specify the Population. This process involves identifying the current and future demographic characteristics of the population affected by the planning issue.

STEP 3 - Assess the Demand. This step analyses the historical utilization of services by population under consideration and taking into account the effects of future changes in the population.

STEP 4 - Assess the Need. This deals with looking at what services a given population should be receiving as opposed to what they have received.

STEP 5 - Determine Requirements for Services. This is a synthesis of Steps 3 and 4 to translate Demand and Need into overall requirements necessary to provide the required services. Our analysis so far deals primarily with overall manpower requirements needed to provide the service.

STEP 6 - Forecast Resource Requirements. This deals with costing issues and make-buy analysis to determine the best mix of direct care and alternative ways of delivering health care.

STEP 7 - Develop a Business Plan. Based upon the alternatives developed in previous steps in addition to guidance provided by BUMED, the MTF will be in a position to develop a Business plan for provision of services. A detailed Business Plan for how you determine health care should be delivered in your catchment area will be developed accordingly.

STEP 8 - Develop Alternative Delivery Strategies. To be individually carried out at each MTF.

SECTION I - IDENTIFY THE ISSUE

A. INTRODUCTION. The first stage in the planning process is to identify the planning issue. In this case, the planning issue is how to determine catchment area health care resource requirements in sufficient detail to support MTF business planning and BUMED policy planning. This broad level of planning should allow the MTFs to look at health care delivery dynamics throughout the catchment area, across medical specialties and across beneficiary categories. It should provide the MTF commander and BUMED with a clearer picture of the health care priorities and issues.

B. GETTING STARTED - WHAT'S NEEDED TO DO THE JOB? Health care planning is not a "seat of your pants", collateral duty type of assignment. It is a professional specialty and has a unique body of knowledge, including established theory and scholarly research. The concepts and methodologies are derived from a multi-disciplinary base, including economics, demography, epidemiology, health services research, business administration, medical sociology, and statistical analysis and methods. Many of the methods used today were initiated in the civilian sector during the mid-1970s, with Certificate of Need legislation requirements for regional health care planning. Successful planners are curious, analytical, and tenacious. They are innovative and creative, but always realists. This manual will help you to start thinking like a planner and give you much of the information you need to get started. Pick up your old textbooks. Planning should be fun and exciting most of the time. Once you get going, hopefully you will agree.

1. OVERVIEW. Data are everywhere and you need as much as possible to be an effective planner. You will be using formal sources of data, including Department of Defense or Navy standardized databases (for example, RAPS, RCMAS, CHCS, MEPRS). Equally important, however, are the informal sources of data you learn everyday - "Chevrolet just decreased health benefits to their white collar workers. Congress just approved a new Veterans Administration hospital to be located in your catchment area. The local school system just mandated that students receive a brand new immunization. One of the line commands you serve is being totally disestablished. Five obstetricians and three nurse midwives have just moved into your catchment area. A new nursing school just opened down the street. One of your operating rooms needs major structural repairs. The Air Force hospital's laboratory had to restrict operations due to an AIDS scare" - and so on. But how much is too much? The short answer is that at one point a planner needs to say, "that's it" and make a decision or a plan based on the best information available at the time. The long answer is that no decision is final, we are constantly making better decisions because of better and more complete information, and the planning process is iterative. One of the characteristics of planning is that it is iterative. "Iterative" means that the replication of a cycle of operations (the planning process) produces results (a plan or decision) which approximate the desired (best plan or best decision) more and more closely.

Equipment requirements for planning can range from pencil and paper to highly advanced computers. Better equipment will not ensure that you will be a top-notch planner, but certain items are required for the job. You will need a personal computer, a modem, and a printer. Commercial computer software packages for word processing and spreadsheet preparation, such as WordPerfect and Lotus 1-2-3, are also necessary. Initially, you may need to be inventive, borrow, and/or share with others. Not everyone can or should have the most powerful computer, software, or statistical packages. Most of you will start with very basic equipment and software. The decision to purchase advanced computer systems and software - like any planning decision - will require your commanding officer to evaluate an analysis of cost/benefits, and command long-range objectives. Certainly, as our planning methodologies evolve, a vintage 1984 IBM probably won't do the job anymore. However, the purchase of a \$5000.00 statistical software package to be used exclusively at a branch clinic most likely will not be appropriate for a long time.

2. DO AN INVENTORY. A major part of your job as a planner will be to seek out information. Your first challenge will be to find out what is available right now that will enable you to get started. The first thing you have is this manual and BUMED's commitment to assist and advise. The important phone numbers in MED-08 are (202) 653-0223/0230, or DSN 294-0223/0230. Second, don't be shy about calling any of the planners listed in Enclosure (1). These are folks who have been doing health care planning for a few years and have probably experienced all the challenges you are about to encounter. Next, do an inventory of the people, equipment, software, databases, and other sources of information at your hospital and clinics. Has anyone ever done health care planning? Do you have a POMI specialist onboard? Does your hospital library have any health care administration and planning texts? What professional management journals are received by the command and how can you get on the distribution list? Is there a budget item for books or professional journals and how can you have input into the selection process? What computer hardware and software already exists at your hospital and clinics? Who owns it and would they be willing to let someone else use it part of the day? Is there a budget item for software and how can you have input into the selection process? What databases exist at the command? Are the data elements relevant to health care planning? Is it possible for you to gain access to the data? What are other sources of data maintained at the command which would be useful for planning? Could those data easily be entered into a database? Will you have a full or part-time staff and what will be their capabilities? If not, is there someone who could be available for a few hours a week to assist you? Finally, do an inventory of the people and data sources available in your catchment area. Do you have a local Veterans Administration, Army, or Air Force medical treatment facility? Do they have a planner? Do they have databases (standardized or informal) which you could access? Do they or the local university have textbooks and/or professional journals which you could use? Does the local university have business or health care administration department with whom you could discuss health care planning?

3. GETTING ORGANIZED. Some of you may already be doing planning on a full-time basis, as a designated organizational entity with a permanent staff and appropriate equipment, supplies and space. For those who are just starting up a formal planning function, here are some ideas about getting started. The health care planner should be designated as such and be assigned full-time to the job. Organizationally, you could effectively work directly either for the Executive Officer or the Director for Administration. At the present time, your organizational placement will be a command decision, based on what is most appropriate for your command functioning. You should have a separate place to work, but if an office is not available, at least space that is only for you and planning, distinct from other activities. At minimal, you should also have: full-time access to a computer, printer and modem; part-time clerical support; a separate phone line; and budget support for required training and basic software.

You can best do your job if you are kept informed of the status of all health care delivery and command activities. It would be most appropriate, therefore, for you to attend, if only as an observer, all major command executive meetings. You should cultivate the medical and nursing clinical department heads to keep up-to-date on current issues and problems. Certainly, the Command Master Chief will want you to be informed of enlisted concerns, issues, and problems. Once again, people ask, "how much is enough", and once again the answer is not simple. The best answer to that question really is another question: "How much time do I need to invest in gathering information and keeping current, while still managing to have time to do the actual planning?" No simple answer. Ask your peers, and they can give you some ideas on how they handle it. Buy-in is important. As a planner, you will need the cooperation and assistance of all the major (and several of the minor) players at your command. Each of them need to know their efforts and time are contributing to a meaningful and useful product. Take the time to inform and involve them. Ask for advice and assistance. Take their suggestions, when appropriate. Help them help you.

4. SETTING REALISTIC GOALS. Start off basic and simple. You can't do it all at once and you can't change the world in one day. It is crucial that you and your supervisor decide on a realistic timetable for what it is you are going to do. What are you going to do? First, you will be setting up shop. Next, you will be doing the baseline assessments described in this manual. Finally, you will begin the planning activities for which this process was designed. Once you start producing meaningful and useful results, many people will be giving you lots of ideas and taskings for projects. It is important that you learn to prioritize, draw up timetables, and delegate (if that is at all possible). Involve others, particularly subject matter experts. They can give you realistic information and potential solutions.

5. ESTABLISHING A BASELINE FOR YOUR CATCHMENT AREA. Before you can begin to examine specific problems and issues and plan for immediate and long-range delivery of health care for your beneficiary population, it is important to take a snapshot of your customers - their health care needs, past consumption of health care services, and requirements for services. In addition, it is important that you examine the various costs of health care services, the health care delivery capabilities in your catchment area, and the environment in which you operate. Once you have a baseline snapshot of where you are, it will be far easier to look at variations and changes. The guidelines presented below are intended to provide you with a framework and some of the more standard data elements used by health care planners. Some of these data are not formally compiled by either BUMED or your command, so in many instances you will be breaking new ground. The guidelines are not intended to be comprehensive and it is expected that you and your command will identify additional data elements to include in your baseline.

C. HEALTH CARE CAPABILITIES ASSESSMENT. After you identify your customers and their health care services requirements, you will want to determine what's available to do the job. In today's environment, planners must look at capabilities in the entire catchment area as well as within their hospital and clinics. At the end of this baseline assessment, you will have a snapshot of all the current and potential clinical capabilities in your entire catchment area. The narrative below will discuss what it is you are to do, and the Tables at the back are included to assist you in recording the information. We request that you use these "Tables" provided for recording all types of information located at TABs - B & C.

1. INTERNAL ASSESSMENT. In this section, you will assess the health care capabilities of your hospital and clinics. For example, you will determine and record where your hospital, clinics, and customers are located; and you will evaluate various access to care factors.

Step One: Map Exercise.

a. Locate and mark on a map: (1) location of your hospital and (2) all your branch clinical facilities.

b. Where do your beneficiaries live? Mark the locations (where known) of large concentrations of beneficiaries (i.e. military housing) in addition to RAPS data on population by zip code. Be creative in finding ways to identify where they live (e.g. look at the zip code printouts, get into an automobile and drive around). Designate the locations by beneficiary type, if at all possible. For example, is there an area where many or most of the retirees live, or where young families live?

c. Your "customers" are not only beneficiaries or patients. Using TABLE 1 as a guide, list all the commands you serve, their major activities, and their location. Then, on a map, mark the locations of all headquarters and all places where naval personnel actually do their work.

d. Identify and list the accessibility of various types (taxi, buses, shuttles, etc.) of transportation to your hospital and clinics. Use TABLE 2 as a guide. Could a person who does not drive get to your MTF? Do the operational units have arrangements to transport military personnel to sick-call and appointments?

e. Look at the parking situation at your hospital and clinics. Is there a problem (cost, wait time, lack of spaces, walking distance from parking spaces) which could discourage people from coming there for care? Use TABLE 3 as a guide for recording the information.

f. What is the distance from the areas where most of your beneficiaries live to your hospital and clinics? What is the travel time? What about the physical condition of the roads? What about traffic congestion? Are there any geographical conditions which could be barriers to access? Climate factors? Use TABLE 4 as a guide for recording the information.

g. What is the travel time from various naval worksites to your hospital and clinics? What about the physical condition of the roads? What about traffic congestion? Are there any geographical conditions which could be barriers to access? Climate factors? Use TABLE 4 as a guide for recording the information.

h. Is there a place to eat at the hospital/clinic or within walking distance? Is the cost reasonable for a young enlisted family or retired person on a fixed income? Is the food nourishing and healthy?

Look at the information you have just collected. Do you think access to your hospital or any of your clinics could be difficult for active duty members or some other beneficiaries because of any of these factors? Explain why or why not. Estimate how many. Do you want to increase access? What could you change to increase access?

2. EXTERNAL ASSESSMENT. In this section, you will assess the health care capabilities of all the other (i.e., non-Navy) sources of health care in your catchment area. Do not be concerned with entering into agreements at this time. All you are doing now is collecting data.

a. Locate and mark on a map the location of all the other health care providers in your catchment area. Be sure to include:

b. All ownership categories: Civilian, Army, Air Force, Uniformed Services Treatment Facility (USTF), Coast Guard, Veterans Administration (VA), Indian Health Service (IHS).

c. All types: hospitals; free-standing and satellite clinics; solo practice and group (HMOs, PPOs, etc.) physicians, nurse practitioners/midwives, physician assistants, allied health professionals (e.g. optometrists, podiatrists, etc.).

d. What is the distance from the areas where most of your beneficiaries live to the locations of the other health care providers in your catchment area? What is the travel time? What about the physical condition of the roads? What about traffic congestion? Are there any geographical conditions which could be barriers to access? Climate factors? Use TABLE 4 as a guide for recording the data.

e. Identify and list the accessibility of various types (taxi, buses, etc) of transportation to and from the other health care providers in your catchment area to your customers living and workplaces, and to your own hospitals and clinics. Use TABLE 2 as a guide for recording the information.

f. Look at the information you just obtained. Do you think access to the other health care providers in your catchment area could be a problem for some beneficiaries because of any of these factors? Explain why or why not. Estimate how many.

Step Two: Assess Your Health Care Capabilities.

3. Assess the Health Care Capabilities of the Other (Non-Navy) Sources. In this section, you will take a "snapshot" - but this time of all the "other" (non-Navy) sources of health care in your catchment area. This assessment will consist of collecting information about the clinical capabilities of all the hospitals, clinics, and providers in your catchment area. Do not be concerned if any of these other sources are available or want to enter into agreements at this time. All you are doing now is collecting data. INVENTORY A is a set of tables designed for easy recording of information about all the other sources of health care in your catchment area. INVENTORY B will assist you with resource issues.

a. Use Tables 5A and 5B to record information about each hospital in your catchment area. All of this is public information or freely shared within the industry.

b. Use Table 6 to record information about each clinic (stand-alone or satellite) in your catchment area.

c. Use Table 7 to record the numbers of physicians, nurse practitioners, and allied health providers, by clinical specialty; and physicians assistants and nurse anesthetists.

d. Identify and list ALL OTHER possible sources of health care providers in your catchment area.

(For example, are there any medical schools, nursing schools, allied health schools? Is there a potential pool of volunteers among the military retired population in your catchment area?)

4. SNAP-SHOT OF HOW CARE IS BEING DELIVERED. Now you will take a "snapshot" of how health care is being delivered RIGHT NOW to your customers. This snapshot will include: (1) the various ways you provide access to clinical services; (2) the providers who deliver the care inhouse; and (3) information about referrals in and out of your hospital and clinics. Look at how your hospital and branch clinics are providing access to care right now.

a. Use Table 8 and denote by an "X" all the various modes you currently use to provide access to inpatient clinical services.

b. Use Table 9 and denote by an "X" all the various modes you currently use to provide access to outpatient clinical services.

c. Look at WHO is performing health care services at your hospital and branch clinics.

d. Use Table 10 and record the actual numbers in each category of physicians, nurse practitioners, physician assistants, nurse midwives, nurse anesthetists, and allied health (e.g. pharmacists, podiatrists, optometrists, etc.) or MSC direct care providers.

e. Please note that "reservists" in mutual support roles, even if for only one weekend a month, are a potential way to increase access and expand capabilities. For example, in some hospitals, reservists use their "weekend drills" to conduct day-long pediatrics or gynecology visits. Record/estimate the capabilities, by specialty and provider types available during each month.

f. Look at your referrals:

(1) What types of cases are being referred to your hospital?

(2) What are you referring to other hospitals/sources of care?

g. Use Table 11 to record the number of admissions, by clinical service and source of referral INTO your hospital.

h. Use Table 12 to record the number of outpatient clinic visits, by clinical service and source of referral INTO your hospital.

i. Use Table 13 to record the number of referrals, by clinical service, which are MADE BY your hospital TO OTHER SOURCES of care.

j. Are any hospitals or clinics in your area "centers of excellence" for particular specialties or procedures? For example, NAVHOSP Bethesda, with the National Institutes of Health across the street may wish to enter into sharing agreements.

k. Do you have a rehabilitation facility in the area which could provide services to your beneficiaries?

l. Are there community-based visiting nurse or home-health services which you could utilize?

m. Are there local alternate sources of emergency transport, care, or actual emergency rooms?

n. Record any other existing sources of health care in your catchment area. Be sure to include those which are for preventive/health promotion services as well as for acute care.

5. ANTICIPATED CHANGES. As a last step, you will take a "best guess" of the future. This will include any anticipated changes in your hospital and clinics (no, not billet growth!) and in the "other" sources of care in your catchment area. This is the section where you will want to record any ideas about expected changes. For example, do you expect/ anticipate any changes in the beneficiary population due to new homeporting or downsizing? Is there a possibility or plan for a new or expanded Veterans Administration hospital? Have you heard that a group of civilian obstetricians is leaving the catchment area? If the Air Force base closes, how many of the retirees do you anticipate will seek services at your hospital? Is the local civilian hospital adding a new wing for pediatric cardiology/cardiothoracic surgery? Will new bridge construction limit access by increasing the travel time for young enlisted families to the naval hospital by one hour? Obviously, for many facilities, BRAC III has already done a lot to shape the future., either in terms of downsizing or closure. However, the rate of change proposed for BRAC IV will be as great as BRACs I, II and III combined, and the experienced gained from previous planning initiatives will be put to good use.

TABLE 1
LIST OF CUSTOMERS
NAVAL HOSPITAL

COMMAND NAME	LOCATION	MAJOR ACTIVITIES

TABLE 2
TRANSPORTATION OPTIONS
NAVAL HOSPITAL _____

TYPE	WHOSE	DESTINATION	HOURS/DAYS	ROUTE

TABLE 3
PARKING ASSESSMENT
NAVAL HOSPITAL _____

LOCATION	SUFFICIENT SPACES	COST	WAIT	WALK TIME

KEY:

LOCATION = NAVAL HOSPITAL, CLINIC NAME

SUFFICIENT SPACES = IS THERE OVERFLOW? ARE THERE PEAK TIMES? IS THERE ENOUGH SPACE?

COST = IS THERE A MONEY OR OTHER (WAIT TIME, DISTANCE, ETC.) COSTS?

WAIT TIME = IS THERE A WAIT TIME FOR A SPACE? HOW LONG IS THE AVERAGE WAIT DURNING PEAK HOURS?

WALK TIME TO MTF = HOW LONG IS THE WALK FROM THE PARKING SPACES TO THE ACTUAL BUILDING?
ARE THERE BARRIERS RESTRICTIVE TO THOSE WHO HAVE TROUBLE WALKING
OR WHO HAVE TO USE ARTIFICIAL AIDS TO WALK?

TABLE 4
ACCESS FACTORS
NAVAL HOSPITAL _____

LOCATION	DISTANCE	TRAVEL TIME	ROADS	TRAFFIC	BARRIERS

KEY:

LOCATION = MAJOR HOUSING AREA (NAME) OR WORKSITE (NAME)

DISTANCE = MILES

TRAVEL TIME = AVERAGE TRAVEL TIME TO MTF. IF MAJOR DIFFERENCE DURING RUSH HOURS, ETC., NOTE ADDITIONAL TIME

ROADS = CONDITION OF ROADS (E.G. MAJOR CONSTRUCTION, IMPASSABLE AFTER NOVEMBER 15, ETC.)

TRAFFIC = ANY MAJOR TIMES OF DAY WHEN MAJOR ROADS ARE HIGHLY CONGESTED? ALTERNATE ROUTES?

BARRIERS = BARRIERS TO ACCESS, INCLUDING GEOGRAPHICAL AND CLIMATOLOGICAL BARRIERS.
FOR EXAMPLE: MAJOR BRIDGES, MOUNTAIN RANGES, BODY OF WATER, MONSOON RAINS, ETC.

[illegible]

TABLE 5B
CURRENT CATCHMENT AREA CLINICAL CAPABILITIES
NAVAL HOSPITAL _____

HOSPITAL NAME	OPERATING ROOMS	OUTPT EXAM ROOMS	ICU BEDS AND TYPE	AV BEDS OCC RATE	ALOS	ADPL	LIVE BIRTHS	DISCHARGES		OUTPT VISITS	
								FY--	FY--	FY--	FY--

Clinics

[illegible]

TABLE 7
 CURRENT CATCHMENT AREA CLINICAL CAPABILITIES
 Providers
 (Physician, NP, Nrs Midwife, Nrs Anesthetist, PA, Allied Health Direct Care Providers)

CLINICAL SPECIALTY	FTEs	

TABLE 8
CURRENT WAYS MTF PROVIDES ACCESS
Inpatient Clinical Services _____

CLINICAL SERVICE	MODE OF DELIVERY							MGD CARE
	INHOUSE	CONTRACT	PARTNERSHIP	MEDEVAC	VA SHARE	OTHER DOD	CHAMPUS	

TABLE 9
CURRENT WAYS MTF PROVIDES ACCESS
Outpatient Clinical Services

[illegible]

TABLE 10
 CURRENT INHOUSE CLINICAL CAPABILITIES
 Number and Source of Providers by Clinical Service
 (Physician, NP, Nrs Midwife, Nrs Anesthetist, PA, MSC Direct Care Providers)

CLINICAL SERVICE	SOURCE OF PROVIDERS					
	BILLETS	ONBOARD	FTE CONTRACT	FTE PARTNERSHIP	CIVILIAN	RESERVISTS

TABLE 11
INPATIENT – ADMISSIONS
REFERRALS FROM OTHER SOURCES

CLINICAL SERVICE	SOURCE OF PROVIDERS						
	ARMY	AIR FORCE	VA	MEDEVAC	USTF	CIVILIAN	OTHER

TABLE 12
 OUTPATIENT - CLINIC VISITS
 REFERRALS FROM OTHER SOURCES

CLINICAL SERVICE	SOURCE OF PROVIDERS						
	ARMY	AIR FORCE	VA	MEDEVAC	USTF	CIVILIAN	OTHER

TABLE 13
REFERRALS TO OTHER SOURCES

CLINICAL SERVICE	SOURCE OF PROVIDERS						
	ARMY	AIR FORCE	VA	MEDEVAC	USTF	CIVILIAN	OTHER

TAB C - INVENTORY B

PART ONE: NAVAL HOSPITAL - Space/Beds

- a. Number of beds routinely currently in use _____ (ADPL)
- b. Number of additional beds which could be supported (with onhand supplies, equipment, bed units, personnel, etc.) _____
- c. Can bed spaces be reconfigured for:
- (1) More efficiency (yes/no) _____
 - (2) Expansion of work-units (yes/no) _____
- d. Is there any vacant space?
- (1) Within the hospital buildings? _____
 - (2) Adjacent land? _____
- e. Can existing spaces be reconfigured for:
- (1) More efficiency (yes/no) _____
 - (2) Expansion of work-units (yes/no) _____
- f. Number of outpatient exam rooms _____

(1) List clinical departments which have outpatient clinics and space (number of rooms) assigned to each:

g. Could outpatient spaces be reconfigured for:

(1) More efficiency (yes/no) _____

(2) Expanded work-units (yes/no) _____

h. Number of operating rooms _____

(1) Number in use per weekday _____

(2) Number in use per weekend day _____

(3) Hours per day each is in use _____

(4) Number not currently used due to physical readiness or staff limitations _____

i. Recovery room capabilities.

(1) Number of patient spaces available _____

(2) Number of spaces used each weekday _____

(3) Number of spaces used each weekend day _____

PART TWO: NAVAL HOSPITAL - Ancillary Services

a. Laboratory capabilities.

(1) List tests/procedures currently performed by your hospital laboratory on a routine basis:

(2) List tests/procedures currently performed by an outside laboratory for your hospital. List test/procedure name and where sent for analysis:

(3) List tests/procedures currently performed by your hospital laboratory on a routine basis for your branch clinics:

b. Radiology capabilities.

(1) List tests/procedures currently performed by your hospital radiology department on a routine basis:

(2) List tests/procedures currently performed by an outside radiology department for your hospital. List test/procedure name and where sent for analysis:

(3) List tests/procedures currently read by an outside radiologist for your hospital. List test/procedure name and where radiologist is located:

c. Pharmacy capabilities:

(1) Number of prescriptions filled per month _____

(2) Number of prescriptions not written by your MTF providers which are filled per month at your pharmacy _____

(3) Average weekday (0900 to 1400) wait time _____

(4) Number of prescriptions filled for beneficiaries who live outside your catchment area _____

d. Immunization capabilities.

(1) List the immunizations your hospital currently administers on a routine basis (please specify which are for children under age seven; and which are for active duty members):

e. Clinical departments.

(1) List the names of the formally-designated clinical departments located at your hospital:

(example: podiatry, internal medicine, OB/GYN, general surgery, neurosurgery)

f. Clinical services.

(1) List the names of the outpatient clinics and clinical services available at your hospital:

(for example: allergy, pediatric neurology, immunizations, well-baby, hypertension, dialysis)

PART THREE: NAVAL HOSPITAL - Manpower/Personnel

a. Military

(1) List all authorized military billets, by NEC for enlisted, subspecialty code for officers.

(2) List all onboard military, by NEC, subspecialty.

b. Civilian

(1) List all civilian personnel authorizations, by job title. Specify if civil service, contract, partnership, or other classification.

(2) List civilian personnel onboard, by job title. Specify if civil service, contract, partnership, or other classification.

PART FOUR: NAVAL HOSPITAL - Training

a. GME

(1) List, by specialty, all GME programs at your hospital, including current number of faculty and students, by year.

(2) List all external arrangements you have with local civilian or other federal hospitals for GME training or programs. Do you share faculty with any of these programs. If "yes", please provide details. How many of your students are assigned to these facilities? Please provide details.

b. Enlisted Training

(1) List all enlisted medical/nursing training at your hospital, including title and number of students per year.

PART FIVE: BRANCH CLINICS Fill in one of the following for each of your branch clinics.

a. BRANCH CLINIC (NAME)

(1) Number of exam rooms _____

(2) Number used for health care _____

(3) Number used for other purposes _____

b. Could clinical spaces be reconfigured:

(1) For more efficiency (yes/no) _____

(2) For expansion of work-units (yes/no) _____

c. Is there any vacant space?

(1) Within the buildings (yes/no) _____

(2) Adjacent land (yes/no) _____

d. Laboratory capabilities.

(1) List tests/procedures currently performed by the clinic's laboratory on a routine basis:

(2) List tests/procedures currently performed by an outside laboratory for the clinic. List test/procedure name and where sent for analysis:

e. Radiology capabilities.

(1) List tests/procedures currently performed by the clinic's radiology department on a routine basis:

(2) List tests/procedures currently performed by an outside radiology department for the clinic. List test/procedure name and where sent for analysis:

(3) List tests/procedures currently read by an outside radiologist for the clinic. List test/procedure name and where radiologist is located:

f. Pharmacy capabilities:

(1) Number of prescriptions filled per month _____

(2) Average weekday (0900 to 1400) wait time _____

(3) Number of prescriptions filled for beneficiaries who live outside your catchment area _____

g. Immunization capabilities.

(1) List the immunizations the clinic currently administers on a routine basis (please specify which are for children under age seven; and which are for active duty members):

h. Clinical services.

(1) List the names of the clinical services available:

(example: allergy desensitization injections, immunizations, hypertension screening, prenatal care, dietary teaching, acute care, podiatry)

i. Manpower/Personnel

(1) Military

(a) List all authorized military billets, by NEC for enlisted, subspecialty code for officers.

(b) List all onboard military, by NEC, subspecialty.

(2) Civilian

(a) List all civilian personnel authorizations, by job title. Specify if civil service, contract, partnership, or other classification.

(b) List civilian personnel onboard, by job title. Specify if civil service, contract, partnership, or other classification.

D. PLANNING CONSIDERATIONS - Measures of Effectiveness (MOEs).

MOEs allow us to examine trade-offs among alternative investment strategies by realizing changes in one area are brought about by changes in another. Fully developed measures of effectiveness will help us achieve a proper balance across our corporate goals and ensure we remain focused on our primary mission - supporting the operational forces of the Navy and Marine Corps. An understanding and appreciation of MTF and corporate Measures of Effectiveness is an important part of the planning process. Our experience to date has shown that corporate MOEs are in fact different from individual MTF MOE's and direct linking the two is important.

Navy Medicine's corporate MOEs are divided into four categories: (1) Readiness, (2) Quality, (3) Satisfaction, and (4) Resource Management. The goal is to create corporate measures and facility measures and to eventually link the two into an integrated measurement system. The Navy Medical Information Management Center has created a program in which proposed core measures have been identified, however the system does not give comparability among navy MTFs. A working group has been convened to refine the core measures to make them a meaningful link with the corporate measures so that MTFs commanding officers have the opportunity of dealing with measures which are important at the facility level, but which might not be important at the corporate level.

1. READINESS. The readiness measure serves to differentiate our health care system from private sector health care systems. The current readiness measures of effectiveness are: (1) military returned to duty, (2) operational manning, and (3) resource and training system information. Military returned to duty is concerned with the number of days that active duty are unavailable due to hospitalization. The goal of this measure is to reduce the number of days that active duty members are unable to work due to hospitalization or illness. This is expressed by the total hospital days per active duty member. Operational readiness shows the percent of fleet billets filled at any given point in time. Operational readiness is that percentile of operational manning. Operational manning is a major concern for military medicine because of our unique Navy and Marine requirements. If there are shortages, they are often filled from a military treatment facility which has caused disruption in the continuity of care at the hospital. The last area of readiness is the status of resources and training systems information. This measures looks at the overall readiness of the fleet hospitals and the medical ships. Status of resources and training systems information are geared toward the readiness of platforms to deploy and do their mission.

2. QUALITY. The quality measure of effectiveness has been defined to be the Joint Commission on Accreditation and Healthcare Organization's Grid Score. This measure indicated compliance with defined standards of care. In addition the measures of effectiveness provide an important tool in presenting Navy Medicine's position to senior Navy leadership, and a baseline for evaluating Navy medicines overall performance. The CNO Executive Steering Committee's Health Care Quality Management Board composed of 3-star Flags has made Medical Measures of Effectiveness one of its highest priority issues.

3. SATISFACTION. The Satisfaction measure reflects the level of beneficiary satisfaction with our health care delivery system. This deals with overall beneficiary satisfaction within military medicine. It serves to educate providers and customers in identifying a place where potential problems may exist. Satisfaction with professional competence deals with beneficiaries' impression that they are receiving quality care. This provides a measure as to how the patient feels about the encounter with the medical provider. Access to care, waiting times, regular source of care and emergency room service are the other satisfaction measures for our beneficiaries. Waiting time is made up of two components: (1) office wait - the time spent sitting in the office waiting to see the provider and (2) appointment wait - the time elapsed between when a person requests an appointment and when that person comes into the office. Regular source of care is concerned with continuity of care. Can the beneficiaries identify a place where they get care when they need it? Do they always go to one place to receive care, or do they have to go to different places each time? Emergency Room (ER) services seeks to identify the percent of people who do not have a regular source of care and go to the ER when they need care. Remember, the emergency room is neither the appropriate place for primary care nor the most cost effective means to deliver primary care. This measure will look at how well Navy medicine is doing at directing patients to the appropriate outpatient setting.

4. RESOURCE MANAGEMENT. The Resources Management measure deals with the optimization of labor and capital. The three major areas are (1) cost per beneficiary, (2) inpatient and outpatient cost trends, and (3) obligations per medical work unit. Cost per beneficiary is designed to approximate the total cost of treating beneficiaries. This cost includes direct, CHAMPUS, co-payments and operational costs. Inpatient and outpatient cost trends are designed to look at how much it costs to treat each patient in the inpatient or outpatient arena in comparison to what is happening in the private sector. The cost per medical work unit is designed to show cost trends for treating patients in two major categories, supply dollars per medical work unit and total cost per medical work unit. A follow-on to MOEs will be discussed in the Utilization Analysis Section.

SECTION II - SPECIFY POPULATION (ESTIMATES AND PROJECTIONS)

A. INTRODUCTION. It is vital for the health care planner to have accurate demographic information about current and future beneficiary population data. The population served is the foundation for health care planning. Only recently has the need for accurate demographic data become so apparent throughout DOD. In the past, beneficiary populations, in terms of size and location have been relatively stable and predictable. With the reduction in force structure, BRAC decisions, coordinated care implementation, and capitation budgeting, numbers of DoD Health Affairs and Service working groups are trying to improve the accuracy of beneficiaries population estimates and projections. While results will not be instantaneous, there is evidence of progress. For example, the Resources Analysis and Planning System (RAPS) database is the only population estimation and projection tool currently available throughout DoD, the Services, and to the MTF as well. It is the tool that DoD uses in Medical Base Realignment and Closure (BRAC) analysis. While the tool is not perfect, it does provide MTF planners with the capability to make projections based on a number of key demographic variables.

Recognizing the importance of RAPS to health care planning, the system has been revised to include initial estimates of population shifts caused by BRAC. Population and demographic information should, at a minimum, address factors such as age, sex, and beneficiary category (RAPS Standardized Report #1). In general, RAPS produces beneficiary population estimates and projections by beneficiary type and geographic area (e.g., catchment area, non-catchment and State). Current out-year population estimates can be based on Base Year FY-92 counts of eligible beneficiaries enrolled in the Defense Enrollment Eligibility Reporting System (DEERS), which RAPS will allow you to project ahead through 1999. The RAPS database creates four types of standard population estimates and projections:

1. **BENEFICIARY POPULATION BY AGE/SEX** - This report provides projections of beneficiary populations by beneficiary category, age, and sex based on the number of eligible beneficiaries enrolled in DEERS. For MTFs, this should initially be based on the Catchment area level of analysis.

2. **NAVY AFLOAT COMPONENT OF ACTIVE DUTY & DEPENDENT POPULATION** - This report provides population projection by age and sex for the Navy afloat component. Navy afloat are assigned to locations based upon a linkage between Unit Identification Codes (UICs) and home port zip codes. Dependents of Navy afloat are allocated to the same home port location as their sponsor.

3. **BENEFICIARY POPULATION BY SPONSOR SERVICE BRANCH** - This report identifies the service branch, and gives population by beneficiary category based on eligible beneficiaries enrolled in DEERS.

4. BENEFICIARY POPULATION BY LOCATION - This report summarizes population by location. It identifies the location, and the total population for each beneficiary category. This report is generated at the catchment area or higher level, but not for the Zip Code level.

Most basic population estimates can be conducted using the age, sex and beneficiary category information in the first standard report category. The other standard report categories can provide information that will be useful as individual local circumstances require, and MTF planners are encouraged to become familiar with all capabilities of RAPS.

Inpatient Catchment areas are defined as sets of zip codes having a radius within 40 miles of the zip code of US military hospitals. Non catchment area population for a given state includes beneficiaries whose zip codes are within the state but not within any catchment area. Since the catchment area population for a given state may include beneficiaries residing in a bordering state, note that, in some cases, adding the catchment and noncatchment populations for a state will not represent the state's total beneficiary population.

B. MILITARY BENEFICIARY POPULATION ESTIMATES AND PROJECTIONS. To begin population analysis, the MTF planner must have access to the RAPS database and the RAPS Model User's Guide. For access into the RAPS database and the most current user guides, contact the Defense Medical Information Systems (DMIS) Office at 1 800 627-DMIS. RAPS identification codes must be known for your MTF in order to run RAPS reports (See RAPS User's Guide).

- a. Location Code: _____ (see appendix B of the RAPS User's Guide)
- b. State/Country Aggregate Code: _____ (see appendix C of the RAPS User's Guide)
- c. Service Area Aggregate Code: _____ (see appendix C of the User's Guide)

The following report(s) will identify current estimates and project population in your catchment area (population with zip codes having radius within 40 miles of the zip code of the military hospital). Service Area will appear at the top of projection run if your MTF is considered to be part of an overlapping service area (circles around a pair of hospitals are considered part of the an overlapping service area if at least 25 percent of the population within 40 miles of one facility is also within 40 miles of the other).

1. REPORT #1 - RAPS Population Projections for Catchment Area.

- (1) Type of implementation:
 - a. Select: 1) Redefined Historical Catchment Areas
- (2) RAPS Options:
 - a. Select: 1) Population Projections by on FY-92
- (3) Projection Years:
 - a. Type: 94,95,96,97,98,99
- (4) Population Report Types:
 - a. Select: 1) Beneficiary Population by Age/sex
 - b. Select: 3) Branch of Service
- (5) Output Explanation Options:
 - a. Select: 1) Include Explanation with Output
- (6) Location Concept:
 - a. Select: 1) Inpatient Catchment Area Concept
- (7) Aggregation Types:
 - a. Select: 1) Individual Catchment/Noncatchment Area
- (8) Individual Location:
 - a. Type: (Location Code) 'See Top of Page'
- (9) Modification Options:
 - a. Select: 1) Baseline Projections
- (10) Running RAPS Report:
 - a. Return to Main Menu
 - b. Select: 4) Execute Vax Command from \$ Prompt
 - c. Type: 'TYPE POP.OUT'

The RAPS users manual will detail the methodologies and assumptions used in developing the projections. Read these and become familiar with them.

C. Optional Reports.

1. REPORT #2 - SERVICE AREA REPORT - If your MTF is part of an overlapping catchment area, you may be interested in seeing population projections for those MTF(s) in the area. For Service Area Report, rerun Report #1, modify step(s):

- (6) Aggregation Types:
 - a. Select: 2) Services Areas
- (7) Service Areas:
 - a. Type: (6009) 'See Top of Page 1'
- (7a) Reporting Levels:
 - a. Select: 3) Reports for both individual and Aggregate Locations

2. REPORT #3 - STATE/COUNTRY (OVERSEAS) REPORT - Shows population projections for state or foreign country by: (1) catchment area, (2) non-catchment area, or (3) both catchment/non-catchment area. For State/Country Report, rerun Report #1, modify step(s):

- (6) Aggregation Types:
 - a. Select: 3) States (and\or overseas countries)
- (7a) Catchment/noncatchment Status:
 - a. Select: 1) Catchment areas only
- (7b) Service Branch:
 - a. Select: 2) Navy catchment area only
- (7c) Reporting Levels:
 - a. Select: 3) Reports for both individual and aggregate locations

Recently, RAPS has been updated to incorporate effects of BRAC population shifts.

D. NAVAL MEDICAL CLINICS. The beneficiary populations and geographic areas served by Naval Medical Clinics are not designated as catchment areas but their staffs should conduct similar demographic analyses. Clinics and Branch Medical Clinics come under respective MTFs and catchment areas. However when the Clinic or Branch Medical Clinic is not located in a catchment area, demographic analyses needs to be done as well. The planner will have to identify the zip codes surrounding these Clinics and contact the RAPS program manager directly to request population projections by specific zip codes. This is explained below.

E. POPULATION BY ZIP CODE. It is not only useful to know the size of the beneficiary population served, but where those beneficiaries are located in your catchment area. As described in the Draft Capabilities Assessment, this is important in identifying the proximity of civilian physicians to our beneficiaries for the establishment of networks, and in identifying geographic barriers to the delivery of health care.

The recommended method of gaining Zip Code information on beneficiaries is to request the information from the RAPS Program Manager, the Defense Medical Information Systems (DMIS) Office at 1 800 627-DMIS. The RAPS system allocates population to Zip Code in the catchment area by allocating the active duty member to the zip code of his assigned UIC and the beneficiaries and retirees to the zip code of residence. All MTF planners should develop Zip Code - based maps for their catchment areas which displays the location of the eligible population by Zip Code and beneficiary category.

F. RAPS LIMITATIONS AND EFFORTS TO IMPROVE.

1. Efforts are underway to have RAPS base years updated with an attempt to keep RAPS and DMDC numbers as close as possible.

2. While RAPS incorporates projected population shifts resulting from BRAC actions, there are limitations. RAPS compares reductions in active force caused by BRAC with projected POM force levels. RAPS spreads the "difference" between POM force levels and BRAC reduction proportionally across CONUS.

3. Population estimates on a zip code basis are not available through the standard RAPS user's package. However, zip code specific information on beneficiaries can be requested through the DMIS Information Center, 1-800-627-3647.

4. RAPS overseas population projections are suspect because active duty members often bring dependents overseas, even if on an unaccompanied tour. In addition, ships assigned to home ports will visit other ports overseas, increasing workload, although RAPS technically assigns this population to the home-port. The development of a more appropriate methodology for overseas MTFs is a high priority.

5. No standardized definition exists for catchment areas of clinics located outside hospital catchment areas (e.g. New Orleans, Key West). The RAPS system will identify beneficiaries residing within 20 and 40 miles of the clinic.

6. Retirees' mailing addresses may not be where they actually reside, thus affecting the RAPS population estimates. RAPS is not able to account for those retirees who spend significant time in more than one location during the year (snow-birds).

7. The RAPS database does not include any civilian workers employed by the military. Civilian employees need to be identified because of Occupational Safety and Health Administration (OSHA) requirements for health services and screening to be provided by the MTF. Therefore, a separate assessment of the civilian workers population within each catchment area is necessary.

G. CIVILIAN POPULATION ESTIMATES. Many of our clinics and MTFs serve a significant number of civilians through occupational health, occupational medicine and other program. Civilian worker data from each command within your catchment area should be sorted into the following four risk categories as defined by OPNAVINST 5100.23B as reported by the Navy Environmental Health Center (NEHC).

Cat. 1: Shipyard Workers

Cat. 2: Naval Air Rework Facility

Public Works Centers

Marine Corps Logistic Centers

Ship Repair Facilities

Cat. 3: Naval Regional Medical Commands

Research and Development Laboratories

Naval Weapon Stations

Naval Supply Centers

Naval Air Stations

Naval Support Activities

Printing and Publishing Centers

Naval Regional Dental Centers

Tenders

Floating Drydocks

Cat. 4: All other assignments at shore facilities

CURRENT CIVILIAN POPULATION IN CATCHMENT AREA

Command	Risk Cat.	Occu. Series	No. of Civilians	Type of Care Req. by OSHA
Total				

This level of baseline analysis should provide information about the numbers of civilian workers and their health care risk categories. The same kinds of basic information about future Dept of Navy civilian employee trends should be developed by working with the civilian personnel offices.

Analysis:

1. Are there plans to increase/decrease the number of civilian workers at any of the commands within your MTF catchment area?

2. How will these changes affect the types of care you provide?

H. Reporting Requirements. The MTF population analysis should, at a minimum include the following:

1. RAPS 1994 thru 1999 Population estimates and demographic analysis based on FY-92 base year.

2. Graphically display the percent of the population that resides in each zip code in your catchment area on a Map. This will provide a visual aide as well as allow you to identify planning issues arising form the location and dispersion of beneficiaries.

3. Analyze the mix of your beneficiary categories by age, sex, branch of service and other demographic factors. It will provide the baseline for the analysis of utilization patterns in the next section.

TAB D - POPULATION REPORT EXAMPLES

RAPS MODEL FY92 BASELINE POPULATION ESTIMATES

REDEFINED HISTORICAL CATCHMENT AREAS NH XXXXXXXXXX

POPULATION BY AGE/SEX

AGE/SEX	ACTIVE DUTY	DEPS OF ACT DTY	MED ELG NG/RES	DEPS OF NG/RES	RETIRED	DEPS OF RETIRED	SURVIVR	TOTAL
00-04/M	--	5498	--	176	--	77	9	5760
05-14/M	--	6237	--	109	--	687	47	7080
15-17/M	--	810	--	9	--	409	29	1257
18-24/M	24595	537	865	8	9	541	68	26623
25-34/M	8970	152	235	8	42	11	42	9460
35-44/M	3331	38	35	4	807	8	14	4237
45-64/M	315	19	6	1	3326	9	3	3679
65+ /M	--	6	--	0	885	6	0	897
00-04/F	--	5278	--	187	--	95	15	5575
05-14/F	--	5952	--	96	--	608	59	6715
15-17/F	--	892	--	13	--	396	26	1327
18-24/F	1120	6882	43	275	7	540	40	8907
25-34/F	538	7121	32	161	13	143	40	8048
35-44/F	174	2852	2	31	16	950	78	4103
45-64/F	12	470	1	6	36	2952	354	3831
65+ /F	--	20	--	0	32	653	338	1043
TOTAL	39055	42764	1219	1084	5173	8085	1162	98542

RAPS MODEL FY92 BASELINE POPULATION ESTIMATES

SEATTLE/TACOMA SERVICE AREA
ALL DoD CATCHMENT BENEFICIARIES

POPULATION BY SPONSOR SERVICE BRANCH

SPONSOR SERVICE	ACTIVE DUTY	DEPS OF ACT DTY	MED ELG NG/RES	DEPS OF NG/RES	RETIRED	DEPS OF RETIRED	SURVIVR	TOTAL
ARMY	17938	28340	1951	2987	15315	20274	3790	90595
NAVY	5415	12299	724	973	11459	14902	2194	47966
AFLOAT	11713	13878	--	--	--	--	--	25591
USMC	501	739	38	45	1154	1384	200	4061
USAF	5183	8419	473	744	11209	14137	1680	41845
USCG	779	1730	24	6	1203	1627	212	5581
OTHER	223	256	0	2	117	148	52	798
TOTAL	41752	65661	3210	4757	40457	52472	8128	216437

* Service Area Includes: MADIGAN AMC-FT LEWIS
NH BERMERTON
PACIFIC MEDICAL USTF SEATTLE

RAPS POPULATION PROJECTION REPORT
FY94 BASED UPON FY92 BASELINE
REDEFINED HISTORICAL CATCHMENT AREAS

CATCHMENTS NORTH CAROLINA
ALL DoD CATCHMENT BENEFICIARIES

POPULATION BY AGE/SEX

AGE/SEX	ACTIVE DUTY	DEPS OF ACT DTY	MED ELG NG/RES	DEPS OF NG/RES	RETIRED	DEPS OF RETIRED	SURVIVR	TOTAL
00-04/M	--	15997	--	597	--	407	39	17040
05-14/M	--	20113	--	836	--	3032	231	24212
15-17/M	--	2885	--	94	--	1851	116	4946
18-24/M	46250	1992	1354	72	40	2632	220	52560
25-34/M	30028	666	971	46	228	79	61	32079
35-44/M	12180	219	365	21	3931	40	45	16801
45-64/M	1258	80	105	5	17770	32	11	19261
65+ /M	--	27	--	0	6245	18	8	6298
00-04/F	--	15201	--	576	--	371	41	16189
05-14/F	--	19261	--	770	--	2992	238	23261
15-17/F	--	3012	--	98	--	1946	139	5195
18-24/F	3619	17575	172	637	16	2819	211	25049
25-34/F	2981	23181	193	803	51	737	99	28045
35-44/F	869	9622	48	328	122	4777	298	16064
45-64/F	54	1589	8	81	139	16067	2248	20186
65+ /F	--	120	--	2	107	4104	2492	6825
TOTAL	97239	131540	3216	4966	28649	41904	6497	314011

SECTION IV - ASSESS NEED

A. INTRODUCTION. The "assess demand" section will discuss health care services that have historically been consumed by our beneficiaries. Assess need is another perspective that planners will address for health care services delivered to the population being served. It is important that a common definition of medical need be used. According to health care economics and planning theorist, medical need is defined as the services required to attain or maintain the health of a population, which may be different from the services historically consumed. While wartime medical planners traditionally have dealt with medical need in terms of morbidity rates applied prospectively to the populations at risk, peacetime health care planners have been limited in their ability to fully address medical need. They have had to rely on historical utilization, not prospective analysis of medical need. Ideally, planning tools dealing with medical need would allow the planner to identify health care delivery trends based on the size and demographic characteristics of a population, not strictly upon the area's historical utilization. We are assembling a body of literature, data sources and information on models available. HMO's may have significant experience in forecasting medical need. We are developing tools that will allow planners to begin this process. As better information and methodologies evolve we will distribute these to the field.

B. EXAMPLE. Assessing need relies on a good demographic profile, which in turn is developed through a well-defined issue. The first step in assessing need is forecasting morbidity for the population being studied. In looking at knee injuries for a specific population, the planner would first consult epidemiological data for a similar population to find an expected rate of knee injuries. The next step is to decide on the level of health desired with respect to the injury or disease. In our example, it might be safe to say that the level of health desired is a fully functioning knee. Then the planner translates the incidence of injury or disease into the health services required to attain the level of health specified. This is where the local planner uses published or local treatment protocols to determine the services expected. For example, an injured knee may require orthopedic surgery, a series of orthopedic clinic outpatient visits, and a course of physical therapy. Thus, the planner has taken a population defined by an issue, and translated it into the health care services required to meet the defined medical need. Another facet of assessing need is within the health promotion component of health care delivery. Even if there is no injury or disease, we want to maintain a particular level of health in our beneficiaries -- particularly active duty members. Once we decide on the level of health we want to maintain, we can decide what health care services our active duty sailors ought to have.

Now that the planner knows the services necessary to meet medical need and the services that have been provided to meet the historical demand, the two will be compared to see if there are differences and the reason for those differences, or analysis of variance. Returning to our injured knees example, we may find that the met or historical demand for orthopedic care related to knee injuries may far exceed what is expected in a similar civilian population. Investigation would likely show that the level and type of activity of the population serves as a reason for the variance, and leads the planner to estimate the total requirement for health care services based on demand, rather than need. An example illustrating the opposite might be the necessary to vaccinate our younger beneficiaries with a new vaccine. This vaccination would not appear in an examination of met or historical demand, but it would appear in an examination of the targeted population in light of medical need. In this situation, need is the driving factor in determining the totality of the requirement for that population. Thus, planners have to look at need and demand and synthesize these into a requirement for health care. This analysis of variance throughout the process is important for at least two reasons - first, it stresses using data to make decisions and its objective is to get the process "in control". This does not mean, for example, that each hospital should have the same length of stay for each DRG, but rather that the length of stay is appropriate at each of our hospitals, according to prevailing local circumstances.

C. "NEEDS" - ONGOING TOOL DEVELOPMENT. The clinical/medical needs module will probably be the last one ready for your use because of its complexity and the vast amount of data which must be organized to ensure the process is valid. SHARICON, Incorporated assisted BUMED planners to complete the first phase of the design by identifying the sources of medical/clinical needs data. Included were sources of data about morbidity and health promotion guidelines by demographic characteristics. BUMED, the Medical Department Specialty Advisors, and NMIMC will now need to determine which of these data to include in the needs assessment module, how to access them, and how to organize them into databases. The final step will consist of developing a model which will enable programmers to actually design the clinical/medical needs module. What we hope to provide you is a module in the Executive Information System (EIS) which will start with the demographic characteristics of the population of interest and produce an output of the predicted morbidity and health promotion guidelines. For further reading on "assessing need" see Enclosure (3).

D. RETROSPECTIVE CASE-MIX ANALYSIS SYSTEM (RCMAS) NORMS AND EXPECTANCY RATES. Planners should be aware that the RCMAS data system uses Direct Care, Civilian Health and Medical Program of the Uniformed Services (CHAMPS), Uniformed Services Treatment Facility (USTF), and civilian normative data to provide statistics of observed versus expected workload, utilization and cost. For further information and/or training for RCMAS use, contact the DMIS information Center at 1 800 627-DMIS.

SECTION V - ASSESS DEMAND (UTILIZATION ANALYSIS)

A. INTRODUCTION. Utilization analysis takes into consideration the types and amounts of care delivered to our beneficiaries, our direct care and CHAMPUS workload. Customarily, we have looked at health care workload in two ways; historically and in aggregate. This approach has a major underlying assumption that the way we deliver care and the populations we serve are going to change little; that what happened in the past is a good predictor of what will happen in the future. All indications show that this assumption will no longer be valid. With downsizing of the Services, the populations we now serve will rapidly change in terms of location, composition and thus affect the way we deliver care. In addition, inpatient care is shifting to outpatient care and inpatient surgical procedures to same day surgeries. Therefore, planners will have to expand their analytical focus to a prospective and population oriented way of looking at workload. That is, expressing workload in terms of the amount of services and the frequency which the population receives these services. On the ambulatory care side, the utilization rate may be expressed in terms of outpatient visits per capita per year; on the inpatient side, in terms of discharges or patient days per thousand beneficiaries, per year. With this approach we can isolate the effects of population and demographics from changes in workload caused by changes in practice patterns. These utilization rates can be applied to the projected population estimates to arrive at future estimates of workload and requirements for health care services in the catchment area.

B. HISTORICAL DEMAND AND CURRENT UTILIZATION. The Managed Care Query Applications (MCQA) system will be used to retrieve catchment area historical and current workload. MCQA was developed as a result of CHAMPUS data based on episodes of care and allows a more timely, single source access to CHAMPUS and MTF workload data. The direct care data comes from Biometrics files and CHAMPUS data files are provided by the Office of the Civilian Health and Medical Programs of the Uniformed Services (OCHAMPUS). MCQA will be used to identify catchment area outpatient workload by clinical service and admissions by major diagnostic category.

The Naval Medical Information Management Center is responsible for MCQA and has designed standardized reports for the purpose of identifying total direct care, CHAMPUS, Supplemental Care and NAVCARE workload data for Navy catchment areas. Planners should be aware that Supplemental Care data is counted as part of "total" workload. When supplemental care days have not been accurately coded on the standard inpatient data record, the MTF receives no credit for this workload. Incorporating NAVCARE workload will not be without its own problems. Currently workload is reported in aggregate. It is anticipated that sometime in FY 1994 NAVCARE data will be available by beneficiary category, but not by age. For planning

purposes, the pediatric portion of the NAVCARE workload should be estimated as follows. Determine the percentage of the beneficiary population age 14 and under (from RAPS) and apply this percentage to the total NAVCARE workload to estimate the total portion of NAVCARE workload attributable to pediatrics. The remainder of the NAVCARE workload should be allocated to primary care workload. If mammography workload is broken out it should be counted with radiology workload. This type of approach will give some better, though not perfect, definition to the care being provided in the NAVCARE clinics. Although utilization planning data can be obtained from several data sources, it is recommended that MTF planners use these fixed reports for consistency.

Each of the following reports should be developed at the clinical service level for outpatient visits and MDC for inpatients. For purposes of analyzing catchment area utilization trends, a clinical service level of detail will be sufficient. However, as planners develop specific delivery alternatives and business plans, analysis at the DRG or patient specific level may be required. Analysis at the DRG level is likely to be required as the Coordinated Care evaluation proceeds. Navy health care planning guidance will use DRG-specific information in the development of MTF-specific business plans and the planning tools for this later part of the process will allow the health care planners to comply with evolving Coordinated Care guidance.

C. DIRECT CARE AND CHAMPUS WORKLOAD DATA. Using MCQA will give the planner the ability to deal with one of the most frustrating planning issues - the seeming incompatibility of MEPRS and CHAMPUS outpatient workload data. CHAMPUS uses categories to aggregate workload which do not easily "map" into the MEPRS work centers. In particular, the CHAMPUS Health Care Summary Report (HCSR) does not contain clinical service categories to easily identify outpatient care provided in the areas of pediatrics, family practice, primary care, or emergency room visits, because they are rolled into other clinical categories. Mismatches such as these frustrate planners' attempts at determining a total catchment area requirement for pediatrics or primary care, for example. MCQA can help planners with this problem because of the ability to identify and summarize CHAMPUS workload by the specialty of the provider rendering the health care service (e.g., how many CHAMPUS outpatient visits were provided by pediatricians or family practitioners). These specialty categories have been mapped into MEPRS work centers which give a more accurate picture from that given in the CHAMPUS Health Care Summary Report. The mapping of CHAMPUS inpatient information into MEPRS work centers remains problematic; however, MCQA can aggregate CHAMPUS and MTF inpatient workload at MDC or DRG levels, but there is no current methodology to map MDC's or DRG's into MEPRS workcenters. Until the development of such a methodology, CHAMPUS and MTF admission data will be based on MDC.

D. HISTORICAL UTILIZATION. At least 3 years of historical workload at the clinical service level should be examined by the MTF planner and is available through MCQA to determine direct care and CHAMPUS workload for FY 91-93. This historical data should be reviewed and analyzed for catchment area trends, variations and/or seasonalities of clinical workload. There may be obvious seasonalities due to the arrival of students at training installations that would affect MTF workload. There also may be changes in the relative proportion of workload between the MTF and CHAMPUS which may need to be correlated to changes in the numbers of providers in certain specialties available at the MTF.

E. CURRENT UTILIZATION DATA. For health care planning analyses, current utilization means the most recent complete fiscal year, rather than the budget execution year. This is for several reasons; (1) to give a full years worth of data, (2) to be comparable with RAPS analysis periods, which are full fiscal years, and (3) to provide more complete and accurate CHAMPUS workload data than execution year would provide. To complete this section of the analysis, planners must have access to MCQA. MCQA can be accessed through your telecommunications software packages over the Local Area Network (LAN) directly into NMIMC's data base. Point of Contact for identification codes and passwords to MCQA can be received through John Weiland, NMIMC Bethesda, who can be reached at (301) 295-0868. Logon to MCQA and run BUMED-93 PLANNING REPORTS, fixed reports 1 and 2 are for standard analysis. These reports contain utilization information as well as demographic information, such as age, sex and beneficiary category. For outpatient data, the level of detail is at the clinical service level, mapping CHAMPUS to MEPRS work centers. For inpatient workload, CHAMPUS and direct care workload are presented at the MDC level. If you are connected to the LAN, you can access MCQA as follows:

- 1) LOAD YOUR NETWORK SOFTWARE
- 2) select: **NETWORK MENUS**
- 3) select: **ACCESS TO MVS**
- 4) at the screen "the following application id's are available to telnet",
type: **TSO**
- 5) type: Your UserID
- 6) type: Your Password
- 7) at the TSO/E Information Center Facility User Services Screen,
select: **8) PDF - ISPF/PDF Services** then **RETURN**

8) at the ISPF/PDF Option Menu: type **TSO MCQA**

You should now be connected to MCQA, enter your natural password and follow the instructions displayed on your screen until you reach the Managed Care Query Application's **MAIN MENU SCREEN**

9) select: **#4 (BUMED-93 Planning Reports)**

Continue to follow instructions on screen to obtain the reports necessary to do your analysis. Once you have determined your selection criteria, the system will ask you to confirm that the information you are requesting is indeed correct. **Xsys** will appear at the bottom right hand corner of screen in bold to let the user know the system is actively retrieving the requested data. After the data is retrieved and the report(s) is on the screen press the PF9 key - which saves your documents on the hard drive as **REPORTS**. To download and print your report(s) you must exit out of MCQA (follow instructions on screen to exit) and return to the C prompt.

1) at the C prompt type: **ftp mvs** (the system will prompt you with userid for logging in)

2) type your userID and return (system will prompt you with userid accepted)

3) type your password and return (system will prompt you with LOGON complete)

4) at the prompt ftp:nmdsc.nmdsc.nnmcc.navy.mil> type: **GET REPORTS**

5) at the prompt local file (default) leave blank and return

6) system will prompt you with data transfer completed closing connection

7) at the > prompt type: quit

8) type: mfprint REPORTS compress

In order to get your reports to print in conjunction with the paper length and width, there is a support program called mfprint. MFPRINT has been included for your convenience. Download MFPRINT before running reports.

Guidance: Run the following Reports using the MCQA Data Base, for FY-91 thru FY-93.

o **REPORT 1: MTF AND CHAMPUS ADMISSIONS** - This report identifies direct care admissions by major diagnostic category for all beneficiaries that were admitted to your MTF and CHAMPUS admissions for those beneficiaries that belong to your catchment area. The "In Catchment Area" column - this identifies admissions for those beneficiaries receiving care at your MTF that belong to your catchment area. The "Out Catchment Area" column - this identifies admissions of those beneficiaries who did not belong to your catchment area but came to your MTF for treatment.

o **REPORT 2: MTF AMBULATORY CARE AND CHAMPUS VISITS** - This report identifies direct care and CHAMPUS outpatient visits by clinical service.

o **REPORT 3: NON-AVAILABILITY STATEMENTS BY CATCHMENT AREA**

o **REPORT 4: OUTSIDE CATCHMENT AREA**

Analysis: Based on the above MCQA Reports, complete the Tables below:

TABLE 1. MTF ADMISSIONS/VISITS

Patient Origin	Admissions FY- n 100%	Visits FY- n 100%
Inside Catchment Area		
Outside Catchment Area		
Total Admissions	100%	100%

TABLE 2. TOTAL CATCHMENT AREA BENEFICIARY ADMISSIONS/VISITS

MTF Site	Admissions FY- n 100%	Visits FY- n 100%
MTF		
CHAMPUS		
Total Admissions	100%	100%

TABLE 3. CATCHMENT AREA BENEFICIARY ADMISSIONS/VISITS TO ALL MTFs

MTF Site	Admissions	Visits
	FY- n 100%	FY- n 100%
MTF Inside Catchment Area		
MTF Outside Catchment Area		
Total Admissions	100%	100%

Analyses of this type, done by MDC, should give a clear picture of patient referral patterns, in and out of your catchment area.

F. PATIENT MIGRATION AND REFERRAL. The above tables look at patient referral and migration patterns in and out of the MTFs catchment area and specifically address managed care issues. A fundamental issue for the planner is the flow of patients in and out of his MTF catchment area and the reasons why. The reason why this kind of information may become more important in the future is financial and because of capitation budgeting. Currently, if a patient from your catchment area is referred to an Army hospital, the care received is paid for by that hospital, not by your MTF's O&M,N funds. Thus, today there exists an incentive to refer these patients out of your catchment area. In the future your MTF may, in fact, be charged by the other MTF for the care received by your catchment area patients. This kind of information is key to establishing baseline information for make-buy decisions in business plans.

Analysis:

1. What is the overall migration pattern within your catchment area for specific DRGs?
2. Do you have more out-migration (patients from inside the catchment area going outside the catchment area for care) or in-migration (patients from outside the catchment area coming into the catchment area for care)?
3. Do you have little of either (a static situation)?

4. Where do the out-migrating patients go for care - In catchment area or outside catchment area? Teaching facilities should expect more in-migration while smaller MTFs may expect more out-migration. MTFs in the South may have in-migration due to snow-birds. Overseas MTFs may have in-migration due to Sailors and Marines assigned to ships or due to non-sponsored dependents.

5. Are there certain clinical specialties where the in/out-migration is particularly high?

NOTE:

RCMAS AS A UTILIZATION TOOL. RCMAS is becoming an increasingly important standardized health care planning tool within DOD. RCMAS offers many capabilities to analyze and compare inpatient MTF and CHAMPUS workload by DRG. All planners are encouraged to become familiar with the capabilities and uses of RCMAS.

G. UTILIZATION ANALYSIS & EVALUATION OF HEALTH CARE OUTCOMES.

Utilization analysis is key to evaluating the effectiveness of delivering health care in the Military Health Services System. Utilization analysis will also be a key part of the Coordinated Care Program Evaluation strategy, directed by OASD(HA) and is key to Navy Medicine's recently developed measures of effectiveness. The planning tools and methodologies developed for Navy Health Care planners will complement the approaches being developed for use in the Navy's Measures of Effectiveness.

The Measures of Effectiveness have four effectiveness criteria and three patterns of variation which combine to form a matrix for the evaluation of Navy health care delivery. The four effectiveness criteria are:

- * Resources (Cost of Care)
- * Quality of Care
- * Customer Satisfaction
- * Readiness Posture

The three patterns of variation are:

- * Variations in a population's utilization patterns - the volume of health services provided to a population.
- * Variations in the referral patterns - the site for those health services (e.g., military or civilian).
- * Variations in the clinical treatment patterns required to produce health care episodes in the MTFs.

This kind of an approach will emphasize the analysis of variation between MTFs in the same geographic area, of the same peer group, among all services. Ultimately the analysis could be carried to individual departments within an MTF, for example to identify causes of variation in Lengths of Stay for the same DRG among different physicians using RCMAS. While this portion of the planning cookbook does not address all aspects of variation in health care delivery, it will at least provide a framework for the planner to address initial aspects of variation.

H. CUSTOMER EXPECTATIONS AND SURVEYS. In addition to utilization analysis, our planning process will have to take into account the expectations of our beneficiaries and customers. A fundamental precept of good health care management is to keep in touch with the customers - our patients, staffs, and line counterparts, to name a few. The predominant way to gather information about customer expectations is through the use of surveys. The process of incorporating customer expectations is likely to affect how we deliver care. An example may be changing the operating hours of the pediatrics clinic to better meet the needs of working mothers, after surveying this customer group. On a DoD level, OASD(HA) is coordinating an annual survey of Navy medical beneficiaries in all catchment areas, and the Center for Naval Analysis (CNA) is conducting customer surveys as a part of the TriCare project evaluation in Tidewater.

I. UTILIZATION ANALYSIS SUMMARY. Completion of this utilization analysis gives the planner the ability to evaluate and analyze what took place in the past, confirm what is currently happening and to forecast what will transpire in the future. Identifying trends, seasonalities and variations is a good predictor for planning and preparing for the unexpected, ahead of time. MCQA developed standardized fixed reports for both Direct Care and CHAMPUS admissions and visits. Supplemental Care Days and NAVCARE visits are also identified. Patient Migration and Referral Patterns gives a clear picture of beneficiaries coming in and going out of the MTF catchment area for health care services. Projections for out-years and planning for that purpose will be done through this utilization analysis in direct relationship with specifications of the population in which you serve.

TAB E - MCQA UTILIZATION REPORT EXAMPLES

NH CAMP LEJEUNE NC FISCAL YEAR 92
MUSCULOSKELETAL & CONNECTIVE TIS

PATIENT CATEGORY	AGE CATEGORY	DIRECT M	F	TOT DIRECT	CHAMPUS M	F	TOT CHAMPUS	IN CATCH AREA	OUT CATCH AREA	SUPP CARE
ACTIVE DUTY	AGES 18-24	540	29	569	0	0	0	340	229	0
	AGES 25-34	329	28	357	0	0	0	299	58	0
	AGES 35-44	148	6	154	1	0	1	142	12	0
	AGES 45-64	13	0	13	15	0	15	13	0	0
DEPENDENTS OF ACTIVE DUTY	AGES 00-04	1	3	4	5	4	9	4	0	0
	AGES 05-14	5	2	7	10	5	15	7	0	0
	AGES 15-17	3	1	4	2	0	2	4	0	0
	AGES 18-24	0	6	6	2	6	8	6	0	0
	AGES 25-34	0	7	7	0	14	14	7	0	0
	AGES 35-44	1	5	6	0	4	4	6	0	0
	AGES 45-64	0	2	2	0	2	2	2	0	0
	AGE UNKNOWN	0	0	0	2	1	3	0	0	0
	AGES 45-64	5	0	5	0	0	0	5	0	0
	AGES 65+	2	0	2	0	0	0	2	0	0
DEPENDENTS OF RETIRED / DECEASED	AGES 15-17	0	0	0	2	0	2	0	0	0
	AGES 18-24	0	0	0	0	1	1	0	0	0
	AGES 35-44	0	0	0	0	1	1	0	0	0
	AGES 45-64	0	4	4	0	17	17	4	0	0
	AGES 65+	0	3	3	0	0	0	3	0	0
OTHER	AGES 18-24	1	0	1	0	0	0	0	1	0
	AGES 45-64	1	0	1	0	0	0	1	0	0
MAJOR DIAGNOSTIC CATEGORY TOTAL		1,049	96	1,145	39	55	94	845	300	0

OUTPATIENT VISITS BY PATIENT CATEGORY
DIRECT CARE/CHAMPUS FOR FISCAL YEAR 93
FACILITY: 0091 NH CAMP LEJEUNE NC

(CLINICS INCLUDED)

--- FIRST LINE OF EACH PROFESSIONAL SERVICE IS DIRECT CARE
--- SECOND LINE OF EACH PROFESSIONAL SERVICE IS CHAMPUS

UCA	SERVICE	ACTDU	DEP ACTDU	RETIRED	DEPREY-DEC	OTHER	TOTALS	WT TOTALS
BAA	INTMED CLINIC	3,190	1,545	1,993	1,244	92	8,064	318
		0	0	0	0	0	0	0
BAK	NEUROLOGY CLINIC	1,699	285	25	5	4	2,018	73
		0	0	0	0	0	0	0
BAL	NUTRITION CL	422	185	88	67	1	763	9
		0	0	0	0	0	0	0
BAP	DERMATOLOGY CL	2,897	1,250	595	441	16	5,199	112
		0	0	0	0	0	0	0
BBA	GENSURGERY CL	2,108	1,928	952	1,085	17	6,090	210
		0	0	0	0	0	0	0
BBD	OPHTHALMOLOGY CL	744	1,042	865	673	18	3,342	92
		0	0	0	0	0	0	0
BBF	OTORHINOLARY CL	1,401	439	117	79	7	2,043	62
		0	0	0	0	0	0	0
BBI	UROLOGY CLINIC	1,320	44	175	14	1	1,554	61
		0	0	0	0	0	0	0
BCB	GYNECOLOGY CL	2,137	4,170	31	511	34	6,883	162
		0	0	0	0	0	0	0
BCC	OBSTETRICS CL	2,939	11,928	8	131	56	15,062	391
		0	0	0	0	0	0	0
BDA	PEDIATRIC CLINIC	23	17,601	0	198	37	17,859	357
		0	0	0	0	0	0	0
BEA	ORTHOPEDIC CL	8,237	563	82	145	32	9,059	327
		0	0	0	0	0	0	0
BEB	CAST CLINIC	889	288	41	40	9	1,267	25
		0	0	0	0	0	0	0
BEE	ORTHO APPLIAN CL	509	74	11	2	0	596	19
		0	0	0	0	0	0	0
BEF	PODIATRY CLINIC	1,826	543	101	215	6	2,691	56
		0	0	0	0	0	0	0
BFD	MENTAL HEALTH CL	3,359	1,545	118	112	3	5,137	170
		0	0	0	0	0	0	0
BFE	SOCIAL WORK CL	119	710	33	68	4	934	19
		0	0	0	0	0	0	0
BFF	SUBSTANCE ABUSE	845	213	3	2	2	1,065	35
		0	0	0	0	0	0	0
BHA	PRIMARY CARE CLS	61,226	200	21	4	32	61,483	1,617
		0	0	0	0	0	0	0
BHB	MED EXAM CL	8,366	0	0	0	16	8,382	273
		0	0	0	0	0	0	0
BHC	OPTOMETRY CLINIC	4,021	386	132	95	87	4,721	76
		0	0	0	0	0	0	0
BHD	AUDIOLOGY CLINIC	293	132	39	21	2	487	7
		0	0	0	0	0	0	0
BHF	COM HEALTH CL	59	106	60	104	10	339	13
		0	0	0	0	0	0	0
BHG	OCCUP HEALTH CL	6,055	0	0	0	3,361	9,416	240

NON-AVAILABILITY STATEMENTS											
MAJOR DIAGNOSTIC CATEGORY											
BY PATIENT TYPE AND PRIMARY REASON											
IN-PATIENT DIAGNOSTIC CATEGORIES											
FY 92 OCT/SEP NAS/DEER COMB											
**** NH CAMP LEJEUNE NC	**** PATIENT TYPE										
MAJOR	TOTAL	DEP	DEP	RET	SURV	FORM	FAC	PROF	FAC	MED	
DIAGNOSTIC		ACDU	RET			SPOUS	TEMP	TEMP	PROF	INAP	
CATEGORY							NA	NA	PERM	NA	
<hr/>											
NERVOUS SYSTEM	30	26	2	2	0	0	1	8	19	2	
EYE DISORDERS	5	2	1	1	1	0	0	2	2	1	
EAR/NOSE/THROAT	21	16	2	3	0	0	2	7	7	5	
RESP SYSTEM	83	67	6	10	0	0	2	14	16	51	
CIRC SYSTEM	58	17	18	20	3	0	2	22	27	7	
DIGESTIVE SYSTEM	81	70	5	5	1	0	4	10	29	38	
HEPATOBIILIARY/PANCREA	20	11	7	1	1	0	3	9	3	5	
MUSCLE/TISSUE DISORDE	101	69	18	13	1	0	2	96	3	0	
SKIN DISORDERS	21	17	2	2	0	0	0	6	13	2	
ENDOCRINE DISORDERS	15	11	4	0	0	0	0	4	8	3	
KIDNEY DISORDERS	52	28	15	8	1	0	1	42	5	4	
MALE REPRO	7	6	0	1	0	0	0	6	1	0	
FEMALE REPRO	80	67	10	0	3	0	10	43	5	22	
PREGNANCY	1799	1772	23	0	4	0	10	1733	21	35	
NEWBORN	78	78	0	0	0	0	7	2	59	10	
BLOOD DISORDERS	7	4	3	0	0	0	0	1	3	3	
MYELO DISORDERS	4	2	1	1	0	0	0	0	4	0	
PARASITIC DISORDERS	12	12	0	0	0	0	0	3	1	8	
MENTAL HEALTH	290	234	39	9	7	1	283	1	4	2	
CHEMCL/SUBSTNCE ABUSE	22	15	1	3	3	0	22	0	0	0	
ACCIDENTS / INJURIES	2	2	0	0	0	0	0	1	0	1	
BURNS	1	1	0	0	0	0	0	0	1	0	
HEALTH STATUS	13	7	2	1	3	0	0	5	0	8	
IN-PATIENT TOTALS	2802	2534	159	80	28	1	349	2015	231	207	

INPATIENT VISITS AT OTHER NAVY MTFs FY 93
06/18/93 15:43:29.5

CATCHMENT MTF	PROVIDER MTF	MDC CODE MAJOR DIAGNOSIS CATEGORY	NUMBER OF PATIENTS SEEN
NH CAMP LEJEUNE NC	NNMC BETHESDA MD	0 UNKNOWN MDC	1
		2 EYE DISORDER	2
TOTAL NUMBER OF PATIENTS SEEN BY	NNMC BETHESDA MD		3
	NH CHERRY POINT NC	0 UNKNOWN MDC	67
		1 NERVOUS SYSTEM	12
		2 EYE DISORDER	1
		3 EAR, NOSE, MOUTH, & THROAT	15
		4 RESPIRATORY SYSTEM	40
		5 CIRCULATORY SYSTEM	8
		6 DIGESTIVE SYSTEM	130
		7 HEPATOBILARY SYSTEM AND PANCREAS	24
		8 MUSCULOSKELETAL & CONNECTIVE TISSUE	43
		9 SKIN, SUBCUTANEOUS TISSUE & BREAST	43

SECTION IV - DETERMINING REQUIREMENTS FOR HEALTH CARE SERVICES

A. INTRODUCTION. There is no magic formula for projecting future requirements for health care services. Having said this, our best guess is a synthesis of knowledge about the likely future demographics of the beneficiary population, what health care services the population has historically used, and whether this historical usage and workload might differ from the actual medical needs of the population. Future delivery requirements are influenced by other factors not directly under the control of the planner, such as system wide resource availability, technology and health care policy to name a few. Nonetheless, the planner must consider the effects of these large scale factors, as well as local factors such as facility constraints and MTF productivity. As discussed in the last section, determining future requirements also should involve a synthesis of medical need with medical demand or historical utilization trends. As tools are developed to synthesize need and demand, they will be incorporated into the planning process. Until the "medical need" portion of the toolbox is more fully developed, health care planners will have to rely on applying historical utilization (use rates) to the projected change in the beneficiary population.

RAPS is the best tool we have at the MTF level to project the effects of population changes on health care service delivery requirements (expressed as outpatient visits and admissions). The RAPS model will project the amount of expected future workload by clinical service by applying utilization rates to population estimates and projections. Projections are assembled from Biometrics MTF workload data and CHAMPUS claims data. Demand is projected for future years assuming that base year inpatient and outpatient workload will change in direct relationship to changes in the population (that is, that the utilization rates will remain constant). RAPS assumes that the MTF is operating at capacity of the base year; therefore, any increase in catchment area workload in future years is presumed to be justified by nondirect care sources such as CHAMPUS. Characteristics for hospitals and stand-alone clinics such as bed size, clinical constraints and occupancy rates can be modified. This will allow the MTF planner to use RAPS to reflect future planning scenarios and potentially to allow the MTF to recover some of the projected increase in health care demand which would otherwise be satisfied by nondirect care sources.

B. Compatibility of CHAMPUS, MEPRS and RAPS. The clinical service categories for CHAMPUS, MEPRS, and RAPS are all different and not directly compatible. This is not an insurmountable problem. For outpatient workload, this can be worked around. As described previously, MCQA will allow CHAMPUS outpatient data to be mapped into MEPRS work centers, which, in turn, will map into RAPS outpatient categories. Since RAPS inpatient base year data comes from DMIS it should be pretty consistent with actual MTF workload.

C. RAPS UTILIZATION PROJECTION REPORTS.

1. **REPORT #1 - INPATIENT DIRECT CARE** - Dispositions and beddays performed at the MTF by clinical service and beneficiary type.

2. **REPORT #2 - INPATIENT NONDIRECT CARE** - Nondirect care admissions and beddays allocated by clinical service and beneficiary type. (Nondirect care can contain estimates of supplemental care and Medicare, in addition to CHAMPUS). Nondirect care for active duty and for beneficiaries aged 65+ is translated as care purchased for the civilian sector.

3. **REPORT #3 - OUTPATIENT DIRECT CARE** - Outpatient workload performed at the MTF by clinical area and beneficiary type.

4. **REPORT #4 - OUTPATIENT NONDIRECT CARE** - Nondirect outpatient visits by clinical service and beneficiary type for both catchment and noncatchment areas. (Nondirect care can contain estimates of supplemental care and Medicare, in addition to CHAMPUS). Nondirect care for active duty and for beneficiaries aged 65+ is translated as care purchased for the civilian sector. Nondirect care for dependents of active duty and under age 65 is translated as CHAMPUS care.

The most current user guides can be obtained by contacting the Defense Medical Information Systems (DMIS) Office at 1 800 627-DMIS. RAPS identification codes must be defined for your MTF in order to run RAPS reports (See RAPS User's Guide).

To complete this section of the assessment, you must use the RAPS database and the RAPS Model User's Guide. Logon to RAPS.

- a. Location Code: _____ (see appendix B of RAPS User's Guide)
- b. State/Country Aggregate Code: _____ (see appendix C of User's Guide)
- c. Service Area Aggregate Code: _____ (see appendix C of User's Guide)

NOTE: For a detailed descriptions of the above RAPS reports, include "explanation" option when running the clinical services projections.

1. RAPS Options:

- a. Select: 2) Workload and Cost Projections
- b. Enter one Year (between 92 and 99) for analysis

2. Report Subjects:
 - a. Select: 1) Utilization Reports
3. Utilization Report Types:
 - a. Select: 1) Inpatient Direct Care Reports
 - 2) Inpatient Nondirect Care Reports
 - 3) Outpatient Direct Care Reports
 - 4) Outpatient Nondirect Care Reports
 - 5) Inpatient Local Destination Direct Care Reports
4. Patient Origins for Inpatient Facility Workload Reports
 - a. Select: 1) Local
 - 2) Nonlocal
5. Output Explanation Options:
 - a. Select: 1) Include Explanation with Output
6. Aggregation Types:
 - a. Select: 1) Individual Locations
7. Modification Options:
 - a. Select: 1) Baseline Projections
8. Running RAPS Report:
 - a. Return to Main Menu
 - b. Select: 4) Execute Vax Command from \$ Prompt
 - c. Type: 'TYPE UTIL.OUT' for screen or printer output
 - d. Reports can be downloaded

Analysis:

1. Run Clinical Service Utilization Reports for each fiscal year up to 1999.
2. List required clinical specialties. Do you now provide all the clinical specialties that your beneficiaries require?
3. Is it possible to recapture your CHAMPUS visits?

D. ANALYSIS. If the population and demographic projections of a catchment area are relatively stable, the future RAPS workload projections are likely to be relatively stable. However, with changes being brought about by current and upcoming BRAC activities, for example, many catchment areas will be experiencing significant population turbulence and changes in workload with the catchment area. In these cases it is very important to look at the population changes by age, sex, and beneficiary category in attempting to project workload. Population changes affect mostly active duty personnel (if those associated with students and schools) will have to be accommodated through the MTF and the direct care system. Population changes affecting CHAMPUS eligible beneficiaries will affect the entire catchment area delivery system.

E. UTILIZATION RATES/TRADE-OFF FACTORS. In considering utilization projections, planners must consider utilization-trade-off factors. In a nutshell, utilization trade-off factors predict that health care utilization rates will change when a CHAMPUS eligible beneficiary goes from the direct care system to CHAMPUS and vice-versa. Because of the costs of CHAMPUS co-pays and deductibles, a beneficiary going from the direct care system to CHAMPUS care statistically will use less health care services and going from CHAMPUS to direct care will use more health care services. This is important to consider as planners develop future utilization scenarios which may have beneficiaries shifting between delivery alternatives.

RAPS takes the trade-off factor into account in the following way: RAPS assumes the MTF operates at full capacity and accommodates active duty first. Any projected workload that could be brought into the MTF increases due to CHAMPUS population is shifted to non-direct care using trade off factors. Similarly, unless otherwise specified, any decreases in workload at the MTF, are taken from CHAMPUS workload. The RAPS trade-off methodology is explained in detail in the RAPS Users Guide.

As mentioned in the introduction, for planning purposes, utilization rates are generally expressed as outpatient visits per capita per year and discharges and/or patient days. Their usefulness lies in the fact that they can be used for comparison and projection independent of the underlying population size, or can be used to predict the effects of changes in population. RAPS contains inpatient and outpatient utilization rates which are expressed in terms of outpatient visits per capita by clinical category and admissions and patient days is compatible with MEPRS work centers only. RAPS is not available at the DRG or MDC level, for inpatient workload. RAPS will be used for forecasting overall levels of MTF catchment area demand and provider requirements, using DoD Health Care Manpower standards. Since the Manpower Standards are based on outpatient workload, the shortcomings in the inpatient data can be tolerated.

F. COMPARISONS - ACTUAL UTILIZATION VERSUS RAPS EXPECTED

UTILIZATION. In order to make worthwhile utilization projections using RAPS, the MTF planner will have to compare RAPS projections for FY-92 with actual FY-92 data from MCQA. For outpatient workload, the total utilization in MCQA (by MEPRS category) will have to be mapped into the RAPS outpatient clinical service categories. The planner should use a Lotus spreadsheet to translate total current utilization into the RAPS clinical service categories. The MTF planner should then examine the FY-92 actual outpatient utilization data with the RAPS FY-92 projected outpatient utilization to identify any clinical service workload where significant discrepancies exist and which require additional analysis. After comparing the actual data against the projected workload, if there is a substantial difference, greater than $\pm 5\%$, the planner should initiate further investigation. If the data is still questionable, check your population data and if any alterations are necessary, incorporate changes under the RAPS modification option, and rerun report. This will adjust your new projections and allow you to acquire better estimates of future projections. For inpatient workload, comparisons total actual workload and RAPS projected workload will have to suffice. The MTF is free to attempt comparisons between MDCs and RAPS inpatient categories, as well.

G. JOINT HEALTHCARE MANPOWER STANDARDS (JHMS). In order to determine the types and number of health care providers required at each of our Navy hospitals and clinics, the Joint Health Manpower Standards (JHMS) Directive 6025.12 and its methodology will be used as the tool for determining health care provider requirements. Through the use of these staffing standards, you, as planners will have a uniformed process for determining what's needed at your particular facility in accordance with the rest of Navy medicine. These standards provide a basis for performance levels and provides guidance for determining demand for workcenter specialties. The standards have been classified into three categories. Type (1) was developed by determining man-hours required to do a job through the use of time studies, work sampling, or a combination of both. The remaining standards are developed by regression analysis and must satisfy specific statistical measures. Type (1) standards are considered engineered standards. Types (2) and (3) were developed by determining manpower requirements when the clinical specialty was not appropriate for engineered methods. The determinant for the classification of these standards is in the developmental methodology.

Each standard defines the workload factor, to be used in application of the standard. The workload factors are reported through MEPRS and DMIS. If new workload factors are identified for use with the standards, they will be added to DMIS. Each standard contains specific instructions for applying the standard to the clinical workcenter specialties. Deviations from these standards are only permitted when written justification has been approved. These standards should be reapplied annually to determine requirements and serve as a guide for allocating authorized billets. For those clinical areas that do not have staffing standard developed, please contact the specialty advisor in order to determine the most appropriate methodology. Efficiency review methodologies used to determine resources required where no staffing standard exist, should be reviewed by BUMED prior to incorporation into this planning methodology. This process is done manually, preferably on a spreadsheet using the JHMS standards and your MEPRS workload data. You can obtain a copy of the Joint Healthcare Manpower Standards, DoD 6025.12-STD through your normal publications channel or from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

Analysis:

1. List all specialties and the number of physicians required to support the requirement.

H. NEW WAYS OF DOING BUSINESS. Planners will identify many kinds of health care services; outpatient care, inpatient care, preventive care, as well as the appropriate provider of the services. In addition, we are in a period of transition in the kinds of services we provided (i.e., shift from inpatient to ambulatory visits) and in who provides the care (i.e., shift from specialist to primary care providers and physician extenders with an emphasis on healthy people). The transition pressures are well summarized in two papers recently developed by BUMED staff which are included as appendices. Enclosure (4), written by LCDR Molly Moon, USNR, defines key issues involved in the delivery of primary care services in Navy Medicine. The paper emphasizes the wide range of primary care providers available in the Navy Medical Department, as well as issues involved in moving from specialty care to a primary care environment. The implication is that in future planning we not only look at how we did business in the past, but also how we want to conduct business in the future and to plan accordingly.

Enclosure (5), developed by Captain William Rowley, MC, USN, describes an HMO approach for determining physician requirements. It is based on ratios of physicians to population served, rather than historical workload generated by a given population. The value of this approach is that it provides a reality check for historically derived utilization rates and workload projection methodologies using RAPS, MEPRS, etc. Both represent trends that may influence Navy Health care delivery. This is especially true for primary care, as Navy's active force downsizes and emphasis shift to providing care to other active forces. Also, capitation based budgeting will shift planning emphasis away from historical workload to move of a population based planning approach. As discussed in the Medical Need section, determining future requirements ideally should involve a synthesis of medical need with historical demand or historical utilization trends. As tools are developed to synthesize need and demand they will be incorporated into the planning process. Our current capabilities rely on applying RAPS utilization rates to the projected beneficiary population to determine workload and then applying the Joint Medical Manpower Standards to the projected workload to estimate provider requirements. Performing this type of analysis on a catchment area basis would provide some future estimate of provider requirement for the entire beneficiary population. Applied to a more specific population segment, it ought provide the basis for determining the number of FTE's required for a PPO network, or to determine the capacity for an MTF in a particular clinical service. Among the tools available to convert workload to manpower are the Joint Healthcare Manpower Standards. In addition, the HMO mode is a physicians to population based approach which provides a generally applied tool to compare current or projected provider requirements with the civilian delivery systems. These comparisons should be performed with the understanding that the readiness component of our activities, while incorporated into the manpower standards, are not reflected in civilian comparisons.

TAB F - RAPS UTILIZATION REPORT EXAMPLES (PROJECTIONS)

RAPS MODEL UTILIZATION PROJECTION REPORT JAN 5, 1994
 FY99 BASED UPON FY90 BASE YEAR UTILIZATION 11:16:57
 V 4.50 12/21/92 LONG TERM PERSPECTIVE BRAC II.01 09/22/92
 NH TWENTYNINE PALMS

DIRECT CARE INPATIENT WORKLOAD : LOCAL ORIGIN

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	TOTAL
INTERNAL MEDICINE					
BEDDAY	589	220	83	106	998
DISPOS	206	91	16	17	330
CARDIOLOGY					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
NEUROLOGY					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
PEDIATRICS					
BEDDAY	0	164	1	0	165
DISPOS	0	65	1	0	66
OTHER MEDICAL					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
GENERAL SURGERY					
BEDDAY	133	88	17	10	248
DISPOS	72	49	12	6	139
ORTHOPEDICS					
BEDDAY	247	22	6	0	275
DISPOS	144	11	3	0	158
OTOLARYNGOLOGY					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
UROLOGY					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
GYNECOLOGY					
BEDDAY	36	209	28	7	280
DISPOS	20	120	7	1	148
OTHER SURGERY					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
OBSTETRICS					
BEDDAY	149	1408	59	0	1616
DISPOS	65	615	26	0	706
PSYCHIATRY					
BEDDAY	0	0	0	0	0
DISPOS	0	0	0	0	0
ALL CLINICAL AREAS					
BEDDAY	1154	2111	194	123	3582
DISPOS	507	951	65	24	1547

RAPS MODEL UTILIZATION PROJECTION REPORT
FY99 BASED UPON FY90 BASE YEAR UTILIZATION
NH TWENTYNINE PALMS

JAN 5, 1994
11:16:57

NONDIRECT CARE INPATIENT WORKLOAD :

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	TOTAL
INTERNAL MEDICINE					
BEDDAY	0	228	151	63	442
DISPOS	0	60	18	11	89
CARDIOLOGY					
BEDDAY	0	29	153	0	182
DISPOS	0	5	28	0	33
NEUROLOGY					
BEDDAY	0	8	2	0	10
DISPOS	0	3	2	0	5
PEDIATRICS					
BEDDAY	0	294	8	0	302
DISPOS	0	86	2	0	88
OTHER MEDICAL					
BEDDAY	0	96	117	0	213
DISPOS	0	8	19	0	27
GENERAL SURGERY					
BEDDAY	0	180	62	25	267
DISPOS	0	43	16	6	65
ORTHOPEDICS					
BEDDAY	0	234	22	1	257
DISPOS	0	38	7	1	46
OPHTHALMOLOGY					
BEDDAY	0	5	0	0	5
DISPOS	0	2	0	0	2
OTOLARYNGOLOGY					
BEDDAY	0	5	16	2	23
DISPOS	0	5	3	1	9
UROLOGY					
BEDDAY	0	32	42	3	77
DISPOS	0	5	4	1	10
GYNECOLOGY					
BEDDAY	0	116	6	3	125
DISPOS	0	55	2	0	57
OTHER SURGERY					
BEDDAY	0	250	72	10	332
DISPOS	0	5	4	1	10
OBSTETRICS					
BEDDAY	0	754	24	0	778
DISPOS	0	293	11	0	304
PSYCHIATRY					
BEDDAY	0	2658	564	0	3222
DISPOS	0	118	12	0	130
ALL CLINICAL AREAS					
BEDDAY	0	4889	1239	107	6235
DISPOS	0	726	128	21	875

RAPS MODEL UTILIZATION PROJECTION REPORT JAN 5, 1994
 FY99 BASED UPON FY90 BASE YEAR UTILIZATION 11:16:57
 V 4.50 12/21/92 LONG TERM PERSPECTIVE BRAC II.01 09/22/92
 NH TWENTYNINE PALMS

DIRECT CARE (WITH ROLLUP) OUTPATIENT VISITS

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	TOTAL
INTERNAL MEDICINE	381	412	553	201	1547
FAM PRAC/PRIMARY CARE	55736	10311	1729	365	68141
FLIGHT/UNDERSEAS MED	0	0	0	0	0
PEDIATRICS	0	6228	85	0	6313
ALLERGY	0	0	0	0	0
CARDIOLOGY	0	0	0	0	0
DERMATOLOGY	2	10	1	0	13
NEUROLOGY	0	0	0	0	0
EMERGENCY MEDICINE	6592	11826	754	273	19445
GENERAL SURGERY	830	548	163	59	1600
ORTHOPEDICS	2630	395	73	27	3125
OPHTHALMOLOGY	0	0	0	0	0
OTOLARYNGOLOGY	0	0	0	0	0
UROLOGY	0	0	0	0	0
GYNECOLOGY	471	2165	113	41	2790
OBSTETRICS	695	6460	270	0	7425
PSYCHIATRY	1813	497	101	12	2423
OPTOMETRY	2588	1419	254	91	4352
ALL CLINICAL AREAS	71738	40271	4096	1069	117174

NONDIRECT CARE OUTPATIENT VISITS
 CATCHMENT AREAS ONLY

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	TOTAL
MEDICAL/PRIMARY CARE	0	16384	3424	508	20316
ALLERGY	150	882	168	77	1277
CARDIOLOGY	10	71	66	38	185
DERMATOLOGY	0	582	114	0	696
NEUROLOGY	23	125	24	15	187
EMERGENCY MEDICINE	0	3340	171	139	3650
GENERAL SURGERY	0	972	652	30	1654
ORTHOPEDICS	0	1325	531	36	1892
OPHTHALMOLOGY	38	645	613	94	1390
OTOLARYNGOLOGY	60	1231	274	44	1609
UROLOGY	49	366	401	64	880
GYNECOLOGY	0	2612	228	19	2859
PSYCHIATRY	0	4853	1267	11	6131
OPTOMETRY	0	0	0	0	0
ALL CLINICAL AREAS	330	33388	7933	1075	42726

SECTION VII - FORECAST RESOURCE REQUIREMENTS

A. INTRODUCTION. For the purposes of planning issues covered in this document, the concept "forecast resource requirements" will include ways to:
1) analyze and distribute workload and provider requirements identified in the previous section, between the direct care system (MTF) and other alternative sources of care, (2) identify available inpatient and outpatient costing methodologies, and (3) give the potential impact of capitation budgeting methodologies on the resource allocation process.

B. ALLOCATION OF RESOURCES BETWEEN DIRECT CARE SYSTEM AND OTHER ALTERNATIVE SOURCES OF CARE. A fundamental concept of managed care in the military setting is the balancing of delivery of care between the direct care system and other health care delivery alternatives in a cost effective manner. Given the historical stability of our populations served and of the number and location of our hospitals and providers, this has been a process of managing at the margin - moving some provider billets between hospitals, contracting for some services at some hospitals, or establishing internal or external partnerships. We have looked at our catchment area management responsibilities primarily in terms of bringing workload back into the MTF without a full understanding of cost implications or whether or not it was the most cost effective thing to do in terms of the entire catchment area. In fact catchment area management involves several pots of money - O&MN, MPN, CHAMPUS, Navcare, Contracts and OMA to name a few.

Events have moved swiftly to change our sense of the "status quo". On a macro level, the implementation of CRI in California and Hawaii represented significant, large scale change, particularly for Navy, with our population focus in California. As importantly, on a smaller scale, the establishment of the external partnership agreement at Naval Hospital Newport also represents a fundamental shift from the status quo. All inpatient workload was shifted to the local civilian hospital, with Navy providers receiving staff privileges. In this process, many billets assigned to the Naval Hospital were ultimately redistributed throughout the claimancy. Most recently, the BRAC process is resulting in major reshuffling of resources within the system. This includes closing naval hospitals Oakland, Long Beach, Philadelphia and Orlando; the downsizing of NH Charleston; and the augmentation of facilities such as NH Great Lakes, to accommodate increased beneficiary population as a result of BRAC. Thus, the "lid is off" of our status quo environment. BRAC IV will drive even more significant change in the system. The need to identify our resource requirements and allocate them better is more important than ever.

C. MEPRS COST ALLOCATION COMPARED WITH CIVILIAN. In order to do this type of allocation, both direct care and CHAMPUS costs need to be identified and compared, and some method of estimating the marginal cost of bringing workload into the direct care system must be available. Traditionally, we have had better success in identifying CHAMPUS costs (both inpatient and outpatient) than MTF costs. This is because inpatient information is derived from the individual inpatient billing record and the outpatient encounters from billing records under CPT4 and ICD9 coding procedures. Direct care inpatient and outpatient costing are hampered by their reliance on MEPRS driven average cost data.

D. INPATIENT/OUTPATIENT COSTING METHODOLOGIES. Because the MEPRS system does not generate a true individual patient bill, rather an average cost, the current system can not offer true case-by-case cost comparisons between the same DRGs for MTFs and CHAMPUS or other delivery alternatives. However, tools are available which refine the MEPRS data on a DRG basis to offer a better comparison of average DRG costs between MTF and civilian counterparts.

E. EXECUTIVE INFORMATION SYSTEM (EIS) FINANCIAL MODULE. The Navy Medicine EIS, under the sponsorship of the Naval Medical Information Management Center (NMIMC) at Bethesda, has as one of its components a Financial Module. Among the capabilities of the module is a "Make-Buy" feature which offers enhanced capabilities to compare average DRG costs between MTFs and catchment area civilian hospitals. The value added for this tool is that it attempts to do a more accurate comparison of institutional, rather than professional service component, of the DRG cost. What this means is that a CHAMPUS inpatient record actually has two cost components an institutional component reflecting the cost of the hospitalization and a professional services component reflecting the cost of the "admitting physician".

However, the MEPRS average inpatient cost has not in the past broken these two costs out separately, rather has identified a single average cost which combines the two. Through the efforts of NMIMC, the "Make-Buy" feature attempts to correct this deficiency so that the civilian average institutional cost per DRG can be compared with an MTF average institutional cost per DRG. This takes the professional component out of the analysis and offers a truer comparison of institution-to-institution costs.

F. RETROSPECTIVE CASE MIX ANALYSIS SYSTEM. RCMAS is a multi-user management information system which supports health care resource analysis and utilization management. RCMAS uses Direct Care, Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), Uniformed Services Treatment Facility (USTF) and Civilian Normative data to provide statistics of observed versus expected workload, utilization and cost. A patient level account of cost incurred by episode of care can be retrieved from RCMAS, so that you, as a planner, can do a detailed cost benefit analysis. Currently, there is no outpatient data for direct care or CHAMPUS in RCMAS, therefore the planner will have to use other data sources for ambulatory care visits. The following is a list of some of the CHAMPUS costing fields that can be found in the RCMAS data system:

- (1) Episode Amount Allowed
- (2) Beneficiary Share Amount
- (3) Billed Amount
- (4) Government Paid Amount
- (5) Other Health Insurance Amount
- (6) Health Care Professional Allowed Amount Total
- (7) Health Care Professional Government Paid Amount Total

In addition, there are many other costing fields that may or may not be useful depending on the type of analysis that the planner is interested in doing. As you become more familiar with the RCMAS system you will be able to do a variety of ad hoc reports primarily to look at the cost of doing business in-house versus using CHAMPUS.

G. RESOURCE ANALYSIS AND PLANNING SYSTEM (RAPS). The cost module of the RAPS model produces estimates of military health care costs for FY-91 through FY-99. Direct and nondirect care cost models are used to translate inpatient and outpatient utilization projections into corresponding cost projections.

Direct care cost projections are estimated using direct care cost models. These models were developed from regression analysis of FY-90 Medical Expense and Performance Reporting System (MEPRS) data mapped into RAPS clinical services. Prior to analysis, the MEPRS cost data were supplemented with estimates of physician specialty pay which were not fully reflected in MEPRS. The direct care cost models contain estimates of both fixed and marginal cost coefficients. Total cost for each beneficiary category equals the sum of the marginal cost coefficients multiplied by the respective beneficiary category workload plus the additional fixed cost component. Separate direct care costs models exist for stand alone clinics, hospitals, referral hospitals, and major medical centers.

Nondirect care costs are estimated from FY-90 CHAMPUS 15-month claims data. Both inpatient and outpatient costs models are catchment area specific. They have been indexed to US averages, and represent the government costs of care only. Inpatient costs were developed from CHAMPUS hospital services and inpatient professional services claims data. Inpatient cost models for each catchment/state noncatchment area are specified by RAPS clinical service, beneficiary type, and NAS status (i.e., NAS required care versus no NAS required care). Outpatient costs were developed from the CHAMPUS Cost and Workload Report and Health Care Summary Report data. Outpatient cost models for each catchment area are specific by RAPS clinical service and beneficiary type. The OCHAMPUS 15-month percentage completion rates listed in the table below were utilized to compute inflation factors that inflated the 15-month claims data into estimates of 24-month billing cycle utilization.

The RAPS model produces the following cost reports:

1. INPATIENT DIRECT CARE COSTS - This report displays inpatient direct care costs for the fifteen inpatient clinical areas and four RAPS beneficiary categories. Fixed cost estimates are not included in beneficiary cost estimates but are reported separately for each clinical area. Costs for inpatient nursery episodes and ambulatory obstetrics are included with inpatient obstetrical costs.

2. INPATIENT NONDIRECT CARE COSTS - This report displays inpatient nondirect care costs for fifteen inpatient clinical areas and four RAPS beneficiary categories. Three cost reports are generated: NAS-required care, care not requiring a NAS, and total nondirect care. Costs for inpatient nursery episodes and ambulatory obstetrics are included with inpatient obstetrical costs.

3. OUTPATIENT DIRECT CARE COSTS - This report displays direct care costs for seventeen outpatient clinical areas and four RAPS beneficiary categories. Costs for outpatient obstetrics are included with inpatient costs. The user may specify that the reported costs for each hospital include the costs for visits performed at nearby clinics that are rolled up into the hospital.

4. OUTPATIENT NONDIRECT CARE COSTS - This report displays outpatient nondirect care costs for fourteen outpatient clinical areas and four RAPS beneficiary categories. Costs for obstetrics visits are included with inpatient costs.

H. MAKE-BUY ANALYSIS. Make-buy analyses not only require reasonable data and methodologies, but need to be done from a rational common sense viewpoint. A couple of examples may get the point across.

- One hospital was considering CHAMPUS recapture by opening up a cardiology unit and bringing cardiac catheterization back into the hospital. However, analysis showed that many of the recaptured patients would be Medicare eligible. Were these procedures to be performed outside the MTF, Medicare would pay for them. If they were performed in the MTF, the DoD would pay for them. This clearly would not have been a wise business decision. Instead, the hospital CO made arrangements for Navy cardiologists to perform cardiac catheterization at a local civilian hospital for much more savings to DoD.

- One hospital made a conscientious decision to reduce its inhouse deliveries and have its obstetricians spend more time on gynecological surgery. This was because the cost for deliveries in the catchment area was low in comparison with the cost of gynecological surgery. Bringing in gynecology at the expense of deliveries made good business sense.

I. CAPITATION BUDGETING. The Military Departments have traditionally programmed and budgeted for health programs on the basis of historical consumption and workload trends (as described under the Utilization Analysis). A limitation to this approach is a built in incentive to produce more services, and thus dis-incentives to produce more service, and dis-incentive for more efficient use of resources. Capitation is an important strategy for containing health care costs. A modified capitation based methodology will be used in Fy-94 for resourcing the Military Departments. The changing environment will dictate a change from disease based workload measures to a capitation based, population based methodology. The military departments will develop their own service - specific methodologies to reallocate resources by capitation to the catchment area level.

The methodology must address O&M (direct care), O&M CHAMPUS, military personnel and population. The methodology must be clear to catchment area commanders that they are fully responsible for all costs. The commander must ensure care is provided in the most cost effective manner (inpatient versus outpatient, direct care versus CHAMPUS) to use preventive services, effectively deliver episodes of care and carefully monitor volume of services provided. Because capitation amounts will be set prospectively, the health care provider can not influence the level of funding within the period of allocation. The methodology is population driven, and accounts for unique military, medical related functions. It is important to note that the modified system is being implemented as a transitional system. The three major categories of care include:

- (1) Military medical support as composed of non capitated functions, including medical readiness not directly related to the size of the force structure.
- (2) Military medical unique capitation rate is additive to the basic capitation rate for active duty military personnel. This reflects cost of military medical unique functions related to the size of the force structure and service specific requirements.
- (3) Medical capitated cost is analogous to the capitation rate used in civilian HMOs and similar to rates charged by compelling health care plans under a national health care plan. This category includes all costs (MILPERS, O&M Direct care and O&M CHAMPUS) associated with providing care, other than specific unique requirements for active duty members and military missions included in the first and second categories.

The Defense Health Program (DHP) is responsible for providing a specific benefit using military personnel funds and O&M funds of military departments do not provided the number of medical personnel originally funded, the DHP can ask the military departments to reprogram unused military personnel funds into the DHP operations and maintenance to make up the shortage. More detail on the Navy approach to capitation budgeting is located in Enclosure (3) - Needs Overview. The concepts of health promotion, wellness, and outcome emphasis all fit into the capitation budgeting concept. Also, refer to planning Step 5 - Determining Requirements for Services. A key level of capitation budgeting is the cost effective delivery of services. The applications and uses of manpower standards discussed in this step will assist in improving the allocation of scarce medical manpower and ensuring effective service delivery. One sure consequence of capitation budgeting is that Lead Agent and MTFs will have to be more aware than ever of the impact of patients from outside the catchment area being treated within catchment area delivery systems. Although under current resourcing formulas, the resources expended on noncatchment area residents who receive care are built into an MTF's historical base, this may not be true under capitation budgeting. Capitation budgeting in a catchment area may be based only on the beneficiaries residing in the catchment area. Patients being treated from outside the catchment area will have to be identified and resourced separately. The MCQA planning reports have the capability to identify these out of catchment area MTF patients.

J. OTHER DATA SOURCES. There are many different data sources that can be utilized in planning the delivery of health care services. Depending on the type of analysis which the planner is conducted will ultimately determine which data source would best suit the needs of the planner. In some instances there will be a need to unroll MDCs and look at DRGs. Situations will arise where the planner will only need to look at visits/depositions at the clinical specialty level with no further detail. This manual was not designed to limit the scope or ability of any issues the planner might need to solve; therefore, we have included a list of additional data sources and a description of what types and kinds of information are contained in them as enclosure (2).

K. SUMMARY. At this point, the following issues should have been dealt with relative to the planning issue (1) identification and prioritization of the issues (2) identification of the current and future demographics of the population affected, (3) analysis of historical and possible future utilization of services, (4) analysis of medical need issues relevant to the issue (if available), (5) identification of requirements for services in terms of workload and/or personnel necessary to provide the services, and (6) identification of the MTFs most cost effective split of workload between MTF and other alternative delivery sources.

TAB G - RAPS COST REPORT EXAMPLES

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RAPS MODEL COST PROJECTION REPORT
FY99 BASED UPON FY90 BASE YEAR COST
LONG TERM PERSPECTIVE

JAN 5, 1994
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NH TWENTYNINE PALMS

DIRECT CARE INPATIENT COSTS (\$000)

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	FIXED	TOTAL
INTERNAL MEDICINE	585	155	72	99	697	1608
CARDIOLOGY	0	0	0	0	0	0
NEUROLOGY	0	0	0	0	0	0
PEDIATRICS	0	183	1	0	30	214
OTHER MEDICINE	0	0	0	0	0	0
GENERAL SURGERY	229	146	32	24	457	888
ORTHOPEDICS	564	40	11	0	264	879
ORAL SURGERY	0	0	0	0	0	0
OPHTHALMOLOGY	0	0	0	0	0	0
OTOLARYNGOLOGY	0	0	0	0	0	0
UROLOGY	0	0	0	0	0	0
GYNECOLOGY	66	390	32	6	229	723
OTHER SURGERY	0	0	0	0	0	0
OBSTETRICS	244	2290	95	0	1659	4288
PSYCHIATRY	0	0	0	0	0	0
ALL CLINICAL AREAS	1688	3204	243	129	3336	8600

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RAPS MODEL COST PROJECTION REPORT
FY99 BASED UPON FY90 BASE YEAR COST
LONG TERM PERSPECTIVE

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NH TWENTYNINE PALMS

NONDIRECT CARE INPATIENT COSTS (\$000)
CATCHMENT AREAS ONLY
TOTAL

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	TOTAL
INTERNAL MEDICINE	0	282	133	58	473
CARDIOLOGY	0	54	210	0	264
NEUROLOGY	0	12	2	0	14
PEDIATRICS	0	477	8	0	485
OTHER MEDICINE	0	147	120	0	267
GENERAL SURGERY	0	375	63	27	465
ORTHOPEDICS	0	285	27	1	313
ORAL SURGERY	0	0	0	0	0
OPHTHALMOLOGY	0	8	0	0	8
OTOLARYNGOLOGY	0	8	19	2	29
UROLOGY	0	46	57	4	107
GYNECOLOGY	0	142	7	3	152
OTHER SURGERY	0	482	129	18	629
OBSTETRICS	0	2902	75	0	2977
PSYCHIATRY	0	1871	268	0	2139
ALL CLINICAL AREAS	0	7091	1118	113	8322

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RAPS MODEL COST PROJECTION REPORT
FY99 BASED UPON FY90 BASE YEAR COST
LONG TERM PERSPECTIVE

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NH TWENTYNINE PALMS

DIRECT CARE OUTPATIENT COSTS (\$000) (WITH ROLLUP)

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	FIXED	TOTAL
INTERNAL MEDICINE	55	59	80	29	245	468
FAM PRAC/PRIM CARE	5158	954	160	34	1562	7868
FLIGHT/UNDERSEAS MED	0	0	0	0	0	0
PEDIATRICS	0	511	7	0	221	739
ALLERGY	0	0	0	0	0	0
CARDIOLOGY	0	0	0	0	0	0
DERMATOLOGY	0	1	0	0	31	32
NEUROLOGY	0	0	0	0	0	0
EMERGENCY MEDICINE	948	1701	108	39	1228	4024
GENERAL SURGERY	135	89	26	10	204	464
ORTHOPEDICS	314	47	9	3	209	582
OPHTHALMOLOGY	0	0	0	0	0	0
OTOLARYNGOLOGY	0	0	0	0	0	0
UROLOGY	0	0	0	0	0	0
GYNECOLOGY	56	258	14	5	155	488
OBSTETRICS	n/a	n/a	n/a	n/a	n/a	n/a
PSYCHIATRY	204	56	11	1	240	512
OPTOMETRY	109	60	11	4	215	399
ALL CLINICAL AREAS	6979	3736	426	125	4310	15576

V 4.50 12/21/92

RAPS MODEL COST PROJECTION REPORT
FY99 BASED UPON FY90 BASE YEAR COST
LONG TERM PERSPECTIVE

JAN 5, 1994
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BRAC II.01 09/22/92

NH TWENTYNINE PALMS

NONDIRECT CARE INPATIENT COSTS (\$000)
CATCHMENT AREAS ONLY
NAS REQUIRED

CLINICAL AREA	ACTIVE DUTY	DEP ACT < 65	OTHERS < 65	OVER 64	TOTAL
INTERNAL MEDICINE	0	277	119	58	454
CARDIOLOGY	0	54	164	0	218
NEUROLOGY	0	10	1	0	11
PEDIATRICS	0	329	6	0	335
OTHER MEDICINE	0	124	61	0	185
GENERAL SURGERY	0	95	41	5	141
ORTHOPEDICS	0	285	15	1	301
ORAL SURGERY	0	0	0	0	0
OPHTHALMOLOGY	0	8	0	0	8
OTOLARYNGOLOGY	0	8	9	2	19
UROLOGY	0	46	57	4	107
GYNECOLOGY	0	126	7	3	136
OTHER SURGERY	0	455	116	0	571
OBSTETRICS	0	2899	75	0	2974
PSYCHIATRY	0	1736	139	0	1875
ALL CLINICAL AREAS	0	6452	810	73	7335

SECTION VIII - BEGIN PLAN DEVELOPMENT

A. INTRODUCTION. The planning process and steps discussed so far have been geared towards MTF planning and resource maximization within the catchment area. The objective has been to determine the best resource mix between MTF and alternative health care delivery sources for provision of services based upon such action as cost comparisons and make-buy methodologies.

In the planning process, BUMED has a major policy role to balance, and in a sense optimize the system - rather than necessarily optimizing individual components of the system. For example, when two MTF's submit plans for OB staffing, the CHAMPUS costs for deliveries and gynecological services may be significantly more expensive in one case. However, due to certain constraints such as space availability, limited staff and/or access to facility may lead BUMED to recommend that the MTF utilization the CHAMPUS system.

In the past, attempts to balance or optimize the system has resulted in some efforts at the margins (not marginal efforts). Most notable was the development of Clinical Specialty Plans in 1991, which attempted to redistribute provider manpower within specialties based upon DoD manpower standards and the and the availability of civilian providers as alternative delivery sources. This process had positive benefits and served as a precursor to current planning activities, but did not address fundamental levels of specialty mix such as primary care and medical education considerations.

B. CURRENT INITIATIVES AND SYSTEM-WIDE BALANCING AND OPTIMIZATION. A number of ongoing and anticipated events are precipitating a move toward major system-wide balance and optimization which will affect individual MTF planning. This included:

(1) Shift towards primary care versus specialty care. Navy Medicine is moving towards the increased use of uniformed clinicians in providing primary care. This shift was recently emphasized in the FY-94 Graduate Medical Education Selection Board which filled almost one third of its slots with applicants in primary care specialties.

(2) BRAC Process. The Brac Process will offer unprecedented opportunity to balance our system aimed closures and realignment, and to place our uniformed providers in support of the line navy in its areas of greatest concentration.

(3) The Center for Naval Analysis (CNA) Force Downsizing Studies and Congressionally Directed 733 Medical Force Study. Navy Medicine has been working with CNA to develop a computerized planning tool which link changes in Navy Medical force structure. In addition a congressionally directed study of the Military health care system (733 Study) is looking at major changes in both the wartime and peacetime military medical structures.

(4) Increased emphasis on peacetime operational support and readiness as linchpins of Navy medicine. In strategic planning and preparation for POM 96, it is clear that Navy medicine must better define its mission in support of our operational forces as the reason for our existence.

All of these system wide issues will affect the resources which BUMED receives and planning for the distribution of those resources. In other words BUMED policy planning will have to recognize and be responsive to MTF planning. At the same time the MTF's may be required to plan or alter existing plans in response to BUMED guidance which reflects system wide optimization issues. However, in either case the planning process and steps discussed earlier would still apply.

SECTION IX - DEVELOP ALTERNATIVE DELIVERY STRATEGIES

A. INTRODUCTION. The development of alternative delivery strategies is, in essence, the development of a business plan or plan of action. It is based on a synthesis of MTF based planning with the corporate policy guidance discussed in section VIII. For example, the MTF may have come up with its optimal mix of allocating health care services and alternative delivery sources. However, if corporate policy issues such as BRAC or downsizing do not provide all the blue-suitors to optimize the MTF's local plan, then alternatives must be developed.

B. BUSINESS PLANS. The Navy hospitals do not currently have a single business plan format. However, many hospitals have undertaken the independent development of a business plan framework, which includes many of the elements discussed in the planning framework and includes most components of a business plan found in planning literature. The following outline and explanation of a business plan development is currently being used at Naval Hospital Portsmouth to guide their identification, analysis and selection of health care delivery.

TRICARE BUSINESS PLAN

Philosophy

The business of providing health care in the nation, in the Department of Defense, and in the Tidewater area has changed. Dollars are in short supply and will be shorter in the future. There is one "pot" of a finite amount of money available to fund a vast amount of needed services. Various scared cows used in the past are no longer adequate justification for expenditures. Value added for the entire catchment area brought by changes to any given process is the measure of success. The value added must be carefully documented in an organized and systematic method using data to drive decisions.

The Tricare Business Plan follows the principles of Total Quality Leadership. Fact based decisions can be defended, where as not arbitrary nor capricious. Without fact based analysis there will be appearances of favoritism which can not be defended.

TRICARE BUSINESS PLAN

I. EXECUTIVE SUMMARY

Purpose: Describe briefly in narrative form the proposed project and highlights of the various sections. Details should be found in the individual sections.

- A. PROJECT DESCRIPTION STATEMENT -- In a short paragraph describe what is it you want to do.
- B. DESCRIBE THE DEPARTMENT/SERVICE -- The project will be within or monitored by an existing department. This section briefly describes the significant highlights of the department.
 - 1. CURRENT STAFF
 - 2. CURRENT WORKLOAD
 - 3. CURRENT COSTS (i.e., OPTAR, COST/VST, COST/ADM)
- C. CHANGE IN SERVICES OFFERED -- Describe why the project is needed, why it will be successful, and how it will impact cost, quality and access.
 - 1. WHY WILL THIS PROJECT BE SUCCESSFUL
 - 2. IMPACT ON COST, QUALITY & ACCESS
- D. COMPETITION PROVIDING SERVICES -- Describe briefly the various ways the proposed service is now provided.
 - 1. CHAMPUS
 - 2. OTHER DIRECT CARE SITES
 - 3. SUPPLEMENTAL CARE
- E. TARGET POPULATION OF NEW SERVICE -- For whom will the project provide services? What will be the mix?
- F. PROJECTED WORKLOAD WITH NEW SERVICE -- Briefly describe the salient points regarding the expected workload as a result of the project and how the project may affect CHAMPUS, the network and the direct care system.
 - 1. IMPACT ON CHAMPUS
 - 2. IMPACT ON NETWORK
 - 3. IMPACT ON DIRECT CARE

- G. PERSONNEL REQUIREMENTS -- State the additional personnel required. Justification as well as evaluation of the various ways of obtaining personnel will be placed in the appropriate section.

1. REQUEST PERSONNEL SUPPORT

- H. FINANCIAL REQUIREMENTS/OFFSETS -- Briefly state the financial requirements and impact of the proposed project and when the anticipated break even point will occur. If other sources of funds will be used so state.

1. FIRST FY STAFF
2. 2ND FY
3. BREAK EVEN

- I. PERFORMANCE MEASUREMENTS AND MILESTONES LEADING TO IMPLEMENTATION -- A brief statement on how the project will be judged should be included. Again details should be in the appropriate section.

II. Functional Area Strategic Plan

Purpose: This section is where the project is placed in perspective to the industry and the MFT.

- A. INDUSTRY ANALYSIS (TRICARE AIDED) -- Tricare has data on the Tidewater area and will help in this area.

1. GROWTH OF AREA
2. HEALTH CARE IN TIDEWATER

- a. NORTH SIDE
- b. SOUTH SIDE

3. CLINICAL INFLUENCES -- There may be changes in the practice of medicine which will affected the proposed project. This would be where such changes would be addressed. The providers sponsoring the project will be the best source of this information.
4. TECHNOLOGICAL CHANGE -- There may be changes in technology which will affect the project. There may be changes on the horizon which would suggest not to pursue the project. The providers sponsoring the project will be the best source of this information.

B. MTF ANALYSIS -- This section describes the MTF in terms of mission, population supported, workload, and costs, and costs in general. Again this is to help put the project in perspective.

1. OBJECTIVE (MISSION) -- The mission statement from the command organization manual with some modifications could serve here.
2. DoD POPULATION PROJECTIONS/HISTORICAL -- DMIS data or data Tricare Ops has could be placed here. Significant historical shifts should be defined.
3. HISTORICAL, CLINICAL SERVICE SPECIFIC, CHAMPUS & DIRECT CARE -- The clinical service data should be highly aggregated such as on the MEPRS report. There should not be much detail in this section.
 - a. WORKLOAD
 - (1) ADMISSIONS
 - (2) OCCUPIED BED DAYS
 - (3) OUTPATIENT VISITS COST
 - b. COST
 - (1) ADMISSIONS
 - (2) OCCUPIED BED DAYS
 - (3) OUTPATIENT VISITS

III. Functional Activity Strategic Plan

Purpose: This section focuses in on the particular department or clinic sponsoring or implementing the proposed projects. This is where the detail begins to take shape.

- A. DEPARTMENT RELATIONSHIP -- What is the mission of the department and how does the department's mission fit into the mission of the command. Are there relationships outside of the command. Describe how the project fits and supports the department's mission.
- B. EVENTS AFFECTING DEPARTMENT'S DEVELOPMENT -- Are there significant events which affected the development of the department which will help someone understand changes in data presented below.

C. CURRENT ORGANIZATIONAL STRUCTURE -- The department or clinic should be described so existing resources can be reviewed. Tables would be appropriated with narrative pointing out items of specific interest and areas investigated and things discovered resulting from these investigations. If there is a gap between the billets assigned and the bodies on board, what is the likelihood there will be filled?

1. ORGANIZATION CHART
2. CURRENT PERSONNEL -- CIVILIAN AND MILITARY TRICARE PLAN
3. BILLETTS AUTHORIZED
4. BODIES ON BOARD
5. UTILIZATION OF SPECIALTY PERSONNEL
6. CONTRACT, PARTNERS, OTHERS
7. STATUS OF CURRENT SYSTEMS

D. HISTORICAL TRENDS -- Tables outlining the various pieces of information over time would be appropriate with comments on important variances.

1. STAFFING -- Has there been a chronic shortage of inability to hire or staff certain positions, and why? What was done to fill these positions?
2. MTF WORKLOAD
 - a. INPATIENT ADMISSIONS/OCCUPIED BED DAYS
 - b. OUTPATIENT
 - c. PARTNERSHIP WORKLOAD
3. CHAMPUS
 - a. INPATIENT
 - b. OUTPATIENT
 - c. COSTS
4. NASs

E. FORECAST WITHOUT CHANGE -- What would happen without implementing the proposed project. This will help build the base for developing and evaluation plan later.

1. STAFFING
2. MTF WORKLOAD
 - a. INPATIENT ADMISSIONS/OCCUPIED BED DAYS
 - b. OUTPATIENT
 - c. PARTNERSHIP WORKLOAD

3. CHAMPUS
 - a. INPATIENT
 - b. OUTPATIENT
 - c. COSTS

F. CURRENT PATIENT MIX -- Describe how patients are directed to the department or clinic now. Describe the demographics of the patient population. Graphs and charts would be appropriate. This will serve to help develop your recapture and evaluation plan.

1. REFERRALS
2. DIRECT APPOINTMENTS
3. STATUS
 - a. ACTIVE DUTY
 - b. DEPENDENT ACTIVE DUTY
 - c. RETIRED
 - d. DEPENDENT OF RETIRED
 - e. MEDICARE ELIGIBLE

G. CURRENT CAPACITY -- Describe the capacity of the department or clinic. What are the current limiting factors preventing the department from fully achieving its mission. This will help define resources required for the project. The project then will address each limitation and describe how they will be met in a later section.

1. SPACE LIMITING
2. STAFF LIMITING
3. EQUIPMENT LIMITING
4. OTHER LIMITING FACTORS

IV. Proposed Functional Activity Improvement Program -- this is the section where the propose project gets fully developed and evaluated.

- A. ASSUMPTIONS -- State all assumptions used in developing and evaluating the project.
- B. DESCRIBE PROPOSED PROJECT -- State what will be required to implement the project and how existing limitations (described above) will be handed.
 - a. FINANCIAL
 - b. STAFFING
 - c. EQUIPMENT
 - d. MATERIALS & SUPPLIES
 - e. PROCESS
 - f. FACILITIES

2. MTF AVAILABLE RESOURCES TO SUPPORT PROPOSED PROJECT -- State if the MTF will support any portion of the project in any manner.
 - a. FINANCIAL
 - b. STAFFING
 - c. EQUIPMENT
 - d. MATERIALS & SUPPLIES
 - e. PROCESS
 - f. FACILITIES
3. EXPECTED RETURN/BENEFITS -- Describe what will be the expected return/benefits because of the implementation of the project. Both quantifiable and qualitative impacts should be addressed.
 - a. OUTPATIENT VISITS
 - (1) DIRECT CARE
 - (2) CHAMPUS
 - b. ADMISSIONS
 - (1) DIRECT CARE
 - (2) CHAMPUS
 - c. OCCUPIED BED DAYS
 - (1) DIRECT CARE
 - (2) CHAMPUS
 - d. OTHER MEASURES
 - e. LINE MILITARY MISSION
 - f. THIRD PARTY REIMBURSEMENT OFFSETS -- Will there be a significant increase in income from 3rd parties to help offset expenses of the project?
4. PERFORMANCE MEASUREMENTS AND MILESTONES LEADING TO IMPLEMENTATION (POA&M) -- Since it will take time to implement the project what are the steps to full implementation. This will help to provide indications early in the project if problems exist phasing plan will help schedule transfer of funds to the MTF.
 - a. TIME TABLE OF MILESTONES
 - (1) PROCUREMENT OF EQUIPMENT
 - (2) FACILITY MODIFICATIONS
 - (3) STAFFING
 - (4) CONTRACT, PARTNERSHIP PROGRESS
 - b. FORECAST OF WORKLOAD
 - c. EXPENDITURE PLAN (PHASED)

d. UTILIZATION MANAGEMENT

5. IMPACT OF PROPOSED PROJECT -- The stated goals of Tricare are improved access to quality health care while controlling costs. Therefore every project needs to be evaluated based on these three areas. That is the purpose of this section. It will be the first (and maybe only) section reviewed by auditors.

- a. COST OF CARE
- b. QUALITY OF CARE
- c. ACCESS TO CARE

C. TARGET MARKET -- Describe who the project will attempt to affect.

1. SCOPE -- Where will patients come from.

- a. MTF CATCHMENT
- b. PENINSULA/SOUTHSIDE
- c. REGIONAL

2. DEFINE TARGET MARKET -- Describe the characteristics of the target market.

- a. CHARACTERISTICS
 - (1) SPONSOR STATUS
 - (2) AGE
 - (3) SEX
- b. REFERRALS
- c. DIRECT APPOINTMENTS

3. SENSITIVITY TO RECAPTURE -- Describe why this group of people can be brought into the project.

4. MARKETING - PLAN HOW TO CAPTURE WORKLOAD -- This is where you spell out just how you will ensure the success of the project by getting the patients into the new service without bringing those you do not want to bring.

- D. INTERFACES -- It is important to consider how the proposed project will affect other departments, other clinics, other MTFs, the network of civilian providers, and the community. It would be unwise to have a project which would adversely affect any one of these groups without carefully weighing the costs and benefits.

1. WITH YOUR MTF
 2. WITH OTHER MTFS
 3. WITH TRICARE NETWORK -- PPO, HMO (FUTURE)
 4. WITH NON-NETWORK
- V. Functional Activity Performance Targets and Measures -- This is the section which begins to lay out the evaluation plan. Describe what things will be measured to know if the project is successful and what operating targets are established for the project.
- A. DESCRIPTION OF MEASURES
 - B. TARGETS
- VI. Evaluation Plan -- Describe how you will know if the project is a success. The plan LT Butler presented could serve as a blueprint for this section.
- VII. Economic Analysis of Proposed Process

STANDARD OPERATING PROCEDURES
FOR
TRICARE PROJECTS

INITIATING TRICARE PROJECT ANALYSIS:

1. Director for Resources (DFR) receives project brief from Director, Managed Care (DMC), with the following included:
 - a. All changes from the current program
 - b. New personnel requirements
 - c. New equipment purchases and/or leasing requirements
 - d. Supply requirements
 - e. Departments or services involved

COLLECTION OF WORKLOAD AND COST:

1. Forms used to collect Cost and Workload are requested from Progress Reports and Statistics Division. The following information is due to Resources Management Division within 2 weeks.
 - a. The Composite Institutional Record (CIR) form, used to request the MCQA CHAMPUS catchment area inpatient workload.
 - b. The Composite Professional Services Record (CPR) form, used to request MCQA CHAMPUS catchment area outpatient visits.
 - c. The TRICARE Recapture Project worksheet used to request MEPRS data.
2. Market Surveys will be initiated and completed by the managed care and are due to Resources Management Division within 1 week, as follows:
 - a. Use three outside sources (Attachment 1) concerning salary information and using the form provided by the Contracting Office (Attachment 2).
 - b. Forward Market Surveys to applicable department head for review.
 - c. If the personnel are determined to be contractual hires submit the Market Surveys with the project, to the Contracting Office.
3. Contractual pay caps for contract personnel are completed by the Contracting Administration, Code 0207.1 and are due to Resources Management Division within 1 week, as follows:

- a. Submit a memo to the Contracting Office, Code 0207.1 for Contractual pay caps for the personnel involved.
- 4. Request the Budget Division provide the following costs to the Resources Management Division within 1 week.
 - a. Supplemental Care Cost involved in project.
 - b. GS pay scale plus fringe benefits for direct hire personnel

ANALYSIS OF PROJECT DATA:

- 1. The following project parameters must be identified:
 - a. Review the MEPRS data
 - b. Lists the catchment areas involved.
 - c. Review the number of inpatient admissions and associated total government cost from MCQA.
 - d. Review the number of outpatient visits and associated total government cost from MCQA.
 - e. List the patient categories that are involved.
- 2. Data Elements entered on the CHAMPUS worksheet analysis areas follows:
 - a. Variable cost per admission with pharmacy costs
 - b. Variable costs per outpatient visits (OPV) without pharmacy costs.
 - c. Establish the percent of projected number of admissions by patient category (number of units are automatically produced).
 - d. Establish the percent of projected number of OPVs by patient category (number of units are automatically produced).
- 3. Determining supply and equipment requirements are as follows:
 - a. Supply Costs = Direct variable cost for supplies times projected units.
 - b. Equipment requirements.
 - c. Other Costs (ancillary) = Average variable cost of the ancillary services times the number of projected units.
- 4. Creating itemized exhibits for the following:
 - a. Personnel costs:
 - (1) Direct hire personnel

- (2) Contract personnel
 - (3) Mix of direct hire and contractual, if necessary
 - b. Supply and Equipment.
5. DFR reviews completed costs analysis.
- a. Make any revisions.

PREPARATION OF BUSINESS PLAN

1. The Business Plan must be provided as follows:
 - a. Part I - Executive Summary.
 - b. Part II - Functional Area Strategic Plan
 - c. Part III - Functional Activity Strategic Plan.
 - d. Part IV - Functional Activity Improvement Program.
 - e. Part V - Evaluation Plan.
 - f. Part VI - Economic Analysis of Proposed Process.
2. DFR reviews Business Plan

FINAL REVIEWS/PRESENTATIONS TO THE DFR AND DMC

- a. Review by Contracting Office.
- b. Presentation to the DFR and DMC.
- c. DFR/DMC review with the department head.
- d. DMC/DFR presentation to the TRICARE project board.
- e. DMC presentation to the Board of Directors.
- f. DMC presentation to the TRICARE Commanders board.

ENCLOSURE ONE

MED-81
HEALTH CARE PLANNERS

<u>MED</u>	<u>NAME</u>	<u>E-MAIL</u>	<u>TELEPHONE</u>
81	Mr. John Durham Head, Strategic Planning	nmc9jrd@bumed40	(202) 653-0230 (A) 294-0230
81S	Ms. Angela Roderick Secretary	nmc2amr@bumed10	(202) 653-1860 (A) 294-1860
811	CDR D. LeDonne NC Deputy, Strategic Planning	nmc2dml@bumed10	(202) 653-0223 (A) 294-0223
813	Dr. Sandra Mayo Health Systems Specialist	nmc8sbm@bumed20	(202) 653-0175 (A) 294-0175
814	Ms. Freda King Management Analyst	nmc2fck@bumed10	(202) 653-0245 (A) 294-0245

Enclosure (1)

ENCLOSURE TWO

SUMMARIZATION OF MILITARY MEDICAL INFORMATION SOURCES

REPORT/SYSTEM NAME	INFORMATION PROVIDED	HOW ACCESSED	POC
Standard Element Activity Reporting System (SEARS)	Navy MTF Data (Admissions, OBDs, Visits, NASS, NAVCARE visits, ALOS, Operating Beds, Occupancy Rate, Births, ADPL, AWUs, IWUs, Weighted Ancillary Services)	Hard Copy Report (Updated Monthly)	NMIMC Bethesda (301) 295-2410 * Call to be added to distribution
Facility Report of Inpatient Services/Biometrics (FRISB)	Navy MTF Data (Dispositions by Work-center, Total Beddays, Cooperative Care Days, Supplemental Care Days, ICU Days, Bassinet Days, Top 20 Diagnoses & Procedures)	Hard Copy Report (Updated Monthly)	NMIMC Bethesda (301) 295-2410 * Call to be added to distribution
Navy Health Care Planning Matrix (HCPM)	Navy MTF Data (Construction Year, Operating Stats, Inpatient Stats, Ancillary Services Stats, Outpatient Stats, Other Navy Clinic Stats, Key Staffing Stats, Budget Data, Population Estimates, CHAMPUS In-patient Stats, CHAMPUS Outpatient Stats, Top 5 CHAMPUS Clinic Services, Area VA/Civilian Hospitals, Area Civilian Physicians, Mobilization Stats)	Hard Copy Report (Updated Annually)	NMIMC Bethesda (301) 295-6202 * Call to be added to distribution
Executive Information System (EIS)	Navy MTF Data (EIS provides decision support info to Navy Healthcare Executives, analysts and facility managers who determine Navy medicine's ability to meet stated goals. Extracts data from multiple NMIMC systems and provides a single source of info concerning all aspects of health care -- Current/Future Modules: Health Care Planning, Human Resources, Education & Training, Health Care Support Operational Forces, Health Care thru Fixed Facilities, Quality Assurance, Manage Finances, Information Resources, Administrative Services, Procurement/ Contracting, Physical Resources, R & D)	NMIMC Mainframe (Access via modem or MED-OA link) * MED-OA preferred (Updated monthly)	NMIMC Bethesda (301) 295-0419 * Call for access ID & password

REPORT/SYSTEM NAME	INFORMATION PROVIDED	HOW ACCESSED	POC
Defense Medical Information System (DMIS) Data: DMIS Product	DoD Data (DMIS data can be accessed via a menu-driven system, or by using SQL queries -- provides historical data for beneficiary populations, facilities, direct care costs/workload, CHAMPUS costs/workload and other aspects of health care delivery. Data organized with respect to facility catchment areas and non-catchment areas of each state/country)	Ft Detrick Mainframe (Access via modem or DDN link)	DMIS Info Center 1-800-627-DMIS * Call for access ID & password OASD(HSO-RAMS) (703) 756-1123
Resource Analysis & Planning System (RAPS): DMIS Product * Note: For BRAC III planning, MED-81/82 developed a "Migration Model" that incorporates RAPS model methodology coupled with macro-driven linked LOTUS spreadsheets.	DoD population, utilization, cost and workload projections (Developed to provide military health care analysts with an automated tool to help assess the impact of various factors on the peacetime delivery of healthcare: excellent tool for conducting "WHAT IF?" analyses)	Ft Detrick Mainframe (Access via modem or DDN link)	DMIS Info Center 1-800-627-DMIS * Call for access ID & password OASD(HSO-OMS) (703) 756-8910
Retrospective Case Mix Analysis System (RCMAS): DMIS Product * Notes: The previous system, RCMAS-P (Proprietary) has been replaced by RCMAS-OSE (Open System Environment). There is a RCMAS-Central for use by OASD(HA), the Surgeons General, etc. There is also a RCMAS-Local for use by individual MTFs. The new information system known as the Military Health Care Management Information System (MHCNIS) will be coming on-line at various locations soon -- its proliferation schedule will parallel that of CHCS. MHCNIS will have RCMAS-OSE as one of its components.	RCMAS is a management information system which provides a capability to easily and quickly perform inpatient health care utilization analyses that support health care management decision making. RCMAS incorporates data from a number of sources. Only system with the capability to perform analyses across USTF, direct care & CHAMPUS while simultaneously comparing multiple civilian and DoD normative sources.	Ft Detrick Mainframe (Access via modem or DDN link)	DMIS Info Center 1-800-627-DMIS Navy Functional Proponent: Mr. Joe Goodin (BUMED-13) (202) 653-1391 * Call for training (Access ID & password received @ training) OASD(HSO-RAMS) (703) 756-1123
MICRO-DMIS: DMIS Product	DoD Data (PC-based system that displays facility-level, monthly workload, NAS and facility data by beneficiary category and allows comparative displays over a wide variety of aggregations -- e.g., Service Branch, DoD Region. Provides graphic and tabular displays which can be printed or plotted as desired. Allows selection of facility-level data based on specified search criteria)	PC-based (Update diskettes received monthly)	DMIS Info Center 1-800-627-DMIS * Call to be added to distribution OASD(HSO-RAMS) (703) 756-1123

REPORT/SYSTEM NAME	INFORMATION PROVIDED	HOW ACCESSED	POC
CHAMPUS Medical Information System (CMIS)	CMIS was developed by Maximus Inc. for OCHAMPUS, and has subsequently been made available to the services for use in managing the CHAMPUS component of their health care operations. CMIS provides data on the cost and workload of CHAMPUS care, aggregated by DoD geographical area (MTF, catchment area, clinic catchment area, or pricing locality), sponsor's branch of service, type of care (inpatient or outpatient), specialty (MDC, DRG, medical specialty, or provider specialty), and other measures. Data are provided monthly but are projected to completion for the fiscal year.	Currently, Navy does not have a platform for CMIS. We are using the Army SG system. (Access via modem) Navy system will soon be available via NMIMC.	Navy CMIS POC: Mr. Greg Atkinson (202) 653-0276 * Call for access ID & password OCHAMPUS POC: Mr. Rich Barnett (303) 361-1006 Maximus Inc. POC: Mr. Rich Keiser (703) 734-4200
Managed Care Query Application (MCQA) * Notes: MED-81 has coordinated with NMIMC to have a section of fixed "BUMED Planning Reports" added to the MCQA. The outpatient report maps CHAMPUS outpatient workload into MEPRS outpatient categories based on the provider specialty code on the CHAMPUS claim. This gives a more "apples to apples" comparison between direct care/CHAMPUS allowing identification of outpatient market share by specialty. The inpatient report provides direct care & CHAMPUS dispositions by MDC, age, sex & beneficiary category. It also indicates dispositions of patients from outside the catchment area.	MCQA provides access to the Navy Inpatient Biometrics data fields that exist on the Standard Inpatient Data Record (SIDR) -- data on Navy direct care inpatient workload. MCQA also provides access to CHAMPUS cost and workload data generated by the Tri-Service CHAMPUS Statistical Database Project -- key to this project is the transformation of fragmented adjudicated claims data into an episode of care format. Also, provides a CHAMPUS Provider File.	NMIMC Mainframe (Access via MED-OA link or modem) * MED-OA preferred	NMIMC Bethesda (301) 295-0868 * Call for access ID & password
CHAMPUS Cost & Workload Report	CHAMPUS report by service branch, category of beneficiary, and type of care (delivery, psychiatric, medical, surgical). Data available for all care, including adjunctive dental, drugs, and program for the handicapped.	Microfiche (Produced quarterly)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
Nonavailability Statement Report	Report summarizes cost & utilization data by clinical specialty and category of beneficiary for comparison with NAS issuances.	Microfiche (Produced quarterly)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
Partnership Summary Report	Summary of partnership cost/utilization data by catchment area and clinical specialty.	Microfiche & Hard Copy Report (Produced quarterly + 24-month FY report)	OCHAMPUS (303) 361-8806 * Call to be added to distribution

REPORT/SYSTEM NAME	INFORMATION PROVIDED	HOW ACCESSED	POC
Partnership Procedure Code Data Report	Summary of partnership procedure code data by provider specialty and catchment area.	Microfiche (Produced quarterly + 24-month FY report)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
Partnership Provider Summary Report	Summary of partnership cost/utilization data by provider.	Microfiche (15-month & 24-month FY reports)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
CHAMPUS Provider Participation Report # 1	Provides individual provider participation rates by specialty of provider by MTF inpatient catchment area and state -- i.e., providers who accepted CHAMPUS assignment.	Microfiche (2X yearly per FY)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
CHAMPUS Provider Participation Report # 2	Provides CHAMPUS professional provider participation rates by provider specialty for each state and MTF inpatient catchment area.	Microfiche (Quarterly & FY)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
CHAMPUS Health Care Summary Report	Provides CHAMPUS cost & utilization data by catchment area and category of care. Outpatient drug, program for the handicapped and adjunctive dental care data are not reported. No breakouts by branch of service, and only partial breakouts by beneficiary category.	Microfiche & Hard Copy Report (Produced quarterly)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
CHAMPUS CPT-4 Procedure Code Report	Cost/utilization data for inpatient MHSS catchment areas. Data includes professional services data for inpatient, outpatient and combined procedures. Data available only for all provider specialties combined.	Hard Copy Report (Fiscal year only with a 15 or 24-month collection period)	OCHAMPUS (303) 361-8806 * Available by special request only
CHAMPUS Ready Access Information System (CRAIS)	Provides the CHAMPUS Maximum Allowable Charge (CMAC) by zip code for each CPT-4 code. Also, allows the user to perform automated searches of the CHAMPUS Policy Manuals.	CD-ROM (Those on distribution list receive periodic updates)	OCHAMPUS (303) 361-8806 * Call to be added to distribution
Quick Response Data File (QRDF)	Full FIDCRS format of CHAMPUS claims data.	Difficult to access. Some personnel have knowledge on how to write COBOL code to extract desired data. If a QRDF query is needed, contact NMIMC.	NMIMC Bethesda (301) 295-1216 * Call to request QRDF queries.

REPORT/SYSTEM NAME	INFORMATION PROVIDED	HOW ACCESSED	POC
Catchment Area Directory	Provides a listing of what zip codes comprise the various catchment areas.	Hard Copy Report (Those on distribution list receive periodic updates)	OASD(HSO-RAMS) (703) 756-1123 * Call to be added to distribution
Billet/Body Database	Provides detailed billet/body data for all Navy activities. Billet/body files are available by corps. Data extracted monthly from the BUPERS Total Forces Manpower Management System (TFMMS).	NMIMC Mainframe (Access via MED-OA link)	NMIMC Bethesda (301) 295-0809 * Call for access ID & password
Medical Expense & Performance Reporting System (MEPRS)	Standard Personnel Management System (SPMS), Worldwide Outpatient Reporting System (WORS), Expense Assignment System (EAS) ver III, Automated Quality of Care Evaluation Support System (AQCESS), Composite Health Care System (CHCS), Integrated Disbursing & Accounting Resource Management System (IDARMS) are all "feeder" systems to MEPRS -- they provide other information as well, but for MEPRS, SPMS provides labor expenses, WORS provides outpatient workload, AQCESS/CHCS provides inpatient workload, and IDARMS provides expense data. MEPRS is the DoD Cost Allocation System. Inpatient data is provided as dispositions & OBDs by MEPRS workcenter with the average cost per disposition and OBD displayed for that workcenter. Outpatient data is provided as visits by workcenter with the average cost per visit displayed for that workcenter.	Hard Copy Report & NMIMC Mainframe (Access via MED-OA link)	NMIMC Bethesda (301) 295-0419 * Call to request hard copy reports and to get access ID & password for mainframe
Defense Manpower Data Center (DMDC)	Provides DEERS/retiree population counts. Data can be provided by zip code, gender, age and beneficiary category.	BUMED-08 & NAVMEDLOGCOM have access to Mainframe @ Naval Postgraduate School, Monterey, CA	BUMED-08 POC: LT Schaffer (202) 653-1972 LT Mihara (202) 653-0100 NAVMEDLOGCOM POC: Mr. Lawrence Little (301) 619-2073 DMDC POC: Mr. Dick Orphin (408) 655-0400

REPORT/SYSTEM NAME	INFORMATION PROVIDED	HOW ACCESSED	POC
Office of Medical/Dental Affairs (OMDA)	Provides supplemental care information on emergency and outcatchment care rendered to active duty (USN/USMC).	Submit a request to OMDA	OMDA Great Lakes Mr. LeBlanc (708) 688-2902
Standard Personnel Management System (SPMS)	A Navy Medical Department Automated Information System (AIS) with the following modules: Manpower/Personnel Management, MEPRS/Military Labor 3, Education & Training, and Medical Personnel Augmentation.	NMIMC Mainframe (Access via MED-OA link or modem) * MED-OA preferred	NMIMC Bethesda (301) 295-0810
Temporary Additional Duty (TAD) Database	A database that tracks Navy Medical Department TAD on an individual basis.	Contact BUMED for a Diskette Copy of the database.	BUMED-312 (202) 653-0242
CHAMPUS Catchment Area Billing Report (CABR)	Tri-Service in & out-catchment (excluding CRI) CHAMPUS obligations.	Hard Copy and Diskette Copy	BUMED-14 (202) 653-1135
CHAMPUS Reform Initiative (CRI) Resource Sharing Report	A report listing all the resource sharing agreements that are in existence in the CRI areas.	Hard Copy Report	BUMED-13 (202) 653-1645
Manpower Analysis & Planning System (MAPS)	Tool used to translate workload (historical, current or forecasted) into staffing requirements	PC-Based (Call HA-HSO for Documentation and Diskettes)	OASD(HSO-OMS) (703) 756-8910 BUMED-15 (202) 653-1221
3rd Party Billing: Third Party Outpatient Collection System (TPOCS)	Amounts billed/collected by CPT-4 procedure code.	Submit request to NMIMC	NMIMC Bethesda (301) 295-0419
Navy Standard Claimancy Accounting Mgmt System (NSCAMS)	Financial accounting information by MTF broken out by AG/SAG, SFC, etc.	Submit request to BUMED-14	BUMED-14 (202) 653-1135
Zip Code Mapping Software	Software that can provide a graphical map picture of a catchment area's population densities and/or CHAMPUS expenditures by zip code.	Submit request to NMIMC	NMIMC Bethesda (301) 295-0819

Compiled by MED-822, 23 Nov 93

DMIS Products - Documents

Catchment Area Directory

A catchment area is defined as all the zip codes with centers 40 miles from the center of the MTF's zip code. This document provides a list of those zip codes.

Health Data Summary

Provides a comprehensive overview of the operations of the Military Health Services Systems (MHSS) for a specified fiscal year. It combines data from many sources in one document.

Medical Expense and Performance Reporting System (MEPRS) Summary Report

Provides a detailed summary of Medical Expense and Performance Reporting System (MEPRS) data reported to the DMIS by the Services for a specified fiscal year.

This document focuses on MEPRS as a uniform system for collecting, processing, and reporting facility-level data that describe medical workload, expense, and staffing by individual work center with the MTF.

Management Information Summary (MIS)

Provides direct care utilization statistics, comparative data, and catchment area direct care utilization details for all DoD hospitals reported by the Service Biometrics Departments. Also provides counts of nonavailability statements from the DEERS automated NAS system.

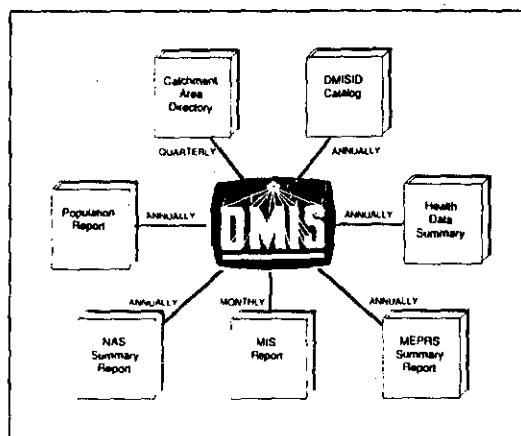
Population Report

Contains several population reports which summarize the fiscal year MHSS beneficiary population.

This document contains detailed location-specific population reports (e.g., a report for each catchment and non-catchment area) and provides further detail on the definition and derivation of these locations. The FY population subtotals are displayed by beneficiary category, age group, and sex; and by beneficiary category and sponsor service.

Nonavailability Statement (NAS) Summary Report

Provides detailed summary of NAS data reported to the DMIS by the Services. The summary includes data by facility, clinical specialty, beneficiary category and reason of issuance.



DMIS Products - Systems

DMIS Menu System

Provides historical data for beneficiary populations, facilities, direct care costs and workloads, the provision of care through civilian sources under the CHAMPUS, and other aspects of the delivery of health care services.

Data are organized with respect to facility catchment areas (for a hospital, this is the area within approximately 40 miles) and the non-catchment areas of each state or country.

Micro DMIS System

A PC based system that displays facility-level, monthly workload, NAS and facility data by beneficiary category and allows comparative displays over a wide variety of aggregations (e.g. Service Branch, DoD Region). Provides graphic and tabular displays which can be printed or plotted as desired. Allows selection of facility-level data based on specified search criteria.

Resource Analysis and Planning System (RAPS)

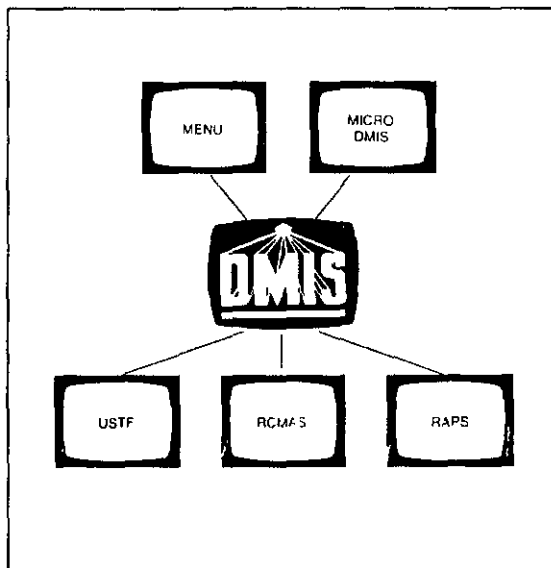
Developed to provide military health care analysts with an automated tool to help assess the impact of various factors on the peacetime health care delivery system. Model capabilities include a population projection option and a resource analysis option.

Retrospective Case Mix Analysis System (RCMAS)

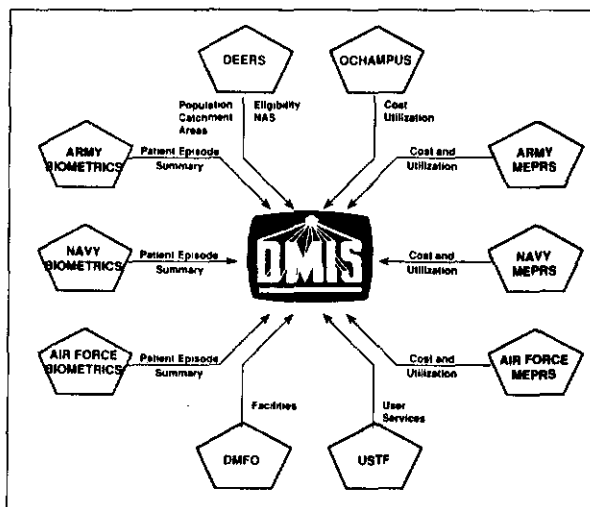
Used for strategic planning and management analysis of the MTF based on the analysis of patient record Diagnosis Related Group (DRG) data. Individual MTFs and headquarter commands benefit from the system's analytical capabilities.

Uniformed Service Treatment Facility (USTF)

Used to process accumulated monthly submissions on a quarterly basis and produce hardcopy management reports for use by the USTFs and the USTF Program Office.



DMIS Sources



Biometrics Offices of the Services
Detailed Individualized Inpatient Medical Treatment Facility (MTF) utilization data. Includes diagnoses, procedures, and patient demographic data, as well as, quarterly data on Nonavailability Statements (NAS) issued.

The DMIS maintains a variety of data that describe the Defense health system in terms that are useful for various planning, policy making, and program design and evaluation activities. These data have been selected to characterize facility costs, utilization and staffing, as well as, catchment area populations and Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) costs and utilization.

Sources of DMIS data are:

Medical Expense and Performance Reporting System (MEPRS)

Facility cost, utilization, and staffing data within a standardized set of functional areas and work centers.

Defense Medical Facilities Office (DMFO)

A wide range of summary data that characterizes military hospitals, medical and dental clinics.

Defense Enrollment Eligibility Reporting System (DEERS)

Selected data from the DEERS enrollment file for determination of catchment area populations, as well as, monthly data on NASs issued.

Office of the Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS)

Selected data from individual claims records describing the care obtained by DoD beneficiaries from the civilian sector.

Uniformed Service Treatment Facility System (USTF)

Patient information for military sponsors and dependents who received care at the ten USTFs.

ENCLOSURE THREE

NEEDS OVERVIEW

A. INTRODUCTION. This section will discuss in detail the importance of recognizing "medical need" and "healthy people." This enclosure will list reference material for further reading or investigation. After the population has been identified, health care planners should conduct an assessment of the populations' health care needs, simultaneous with or in the same general time period with the assessment of demand, discussed in the previous section. MacStravic, a leader in the field of health care planning states: "...the general purpose of health planning is to identify needs and to use them as goals in developing health action strategies" (p. 2).

In the context of this document, health care need is defined as the services required to attain or maintain health. In the broader sense, health care need includes not only a set of health care services, but also the "the manpower, equipment, and facilities determined by organizations and communities to be requirements for maintaining and improving health" (MacStravic, p. 11).

Support for needs assessment is an important component of health care planning. Military health planners have traditionally focused upon historical demand for care, as opposed to medical need. There is, however considerable support for needs assessment as a vital component of health care planning in the following areas:

- a. Operational Medicine--As a military health care system, emphasis must be placed upon the health services needed to maintain a ready fighting force during wartime and peacetime.
- b. Health Care Reform--Shift in emphasis from excellent health care for the few to basic minimum health care for the many will require a needs-focused, cost-effective health care system with greater emphasis upon preventive, primary and ambulatory care.
- c. DoD has been directed by Congress to develop a plan to implement the national objectives, Healthy People 2000, National Health Promotion and Disease Guidelines, published by the Department of Health and Human Services (DHHS) in September 1990. DoD has incorporated 181 of the 383 DHHS objectives into the DoD implementation plan. Health promotion is needs-focused.

ENCLOSURE (3)

25 Jan 94

d. Accrediting and Regulating Agencies are focusing on need. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) 1994 Accreditation Manual for Hospitals standard LD.1.3 requires an organizational plan that "includes patient care services in response to identified patient needs...." Also, performance standards for comprehensive [community or catchment area] health planning from the Department of Health, Education and Welfare (DHEW) 1973 state: "The (health) plan should describe and analyze specific actions to meet area health needs...and delineate specific actions to meet area health need." Another DHEW reference states that "the planning of health facilities is based primarily on the identification of what health services are needed, where and in what volume" (MacStravic, p. 55).

e. Total quality leadership (management) places emphasis on need. Juran, a leader in the total quality management movement, states that: Without exception, all published quality policies declare the intention to meet the needs of customers. The wording often includes identification of specific needs to be met--for example, that the company's products should provide customer satisfaction." (Emphasis in original. Juran, p.186). He also advises planners to state customer needs in both quantitative and qualitative terms and points out that the goal of product performance relates to performance features in response to customer needs, such as promptness of service (p. 187). Juran also offers examples of Customer Need Flow Charts which are useful to planners (chap. 4).

B. DIFFERENCE BETWEEN NEED AND DEMAND. Demand, for purposes of this section, is met need. It is documented care provided to patients to meet specific health care needs identified by themselves and the providers of care. Demand is objective in that it is statistically quantifiable. Health care need, on the other hand, is more subjective and includes both met and unmet demand for health care services. Actual utilization is generally accepted as the equivalent of demand.

Health needs cannot be measured,...determination of needs is the result of a subjective decision-making process rather than an objective measurement.... Ultimately, health needs are determined by an intellectual and political process which sets and modifies the goals and standards for health services; those goals and standards are then used to guide the development of the health system." (MacStravic, p. 8)

C. DETERMINING HEALTH CARE NEED. There are many inherent challenges associated with determining health care need. Determination of need is complicated by the facts that stated needs sometimes do not adequately reflect the real needs behind customer selections, customers have perceived needs that may not be born out by medical fact, and they also have regional and cultural needs, and those traceable to unintended use. An example of the latter is the frequent use of emergency departments by patients for non-emergent care. Customers' needs are also a moving target. New technology, market competition, social upheaval, and international conflicts are changing forces that create new customers' needs or change the priority given to existing ones. Because needs are not measurable, and often subjective, they are difficult to specify.

Several types of health care needs have been defined in the literature. "As Donabedian describes it, health needs begin with a state of health, but are expressed in a need for services conceived in response to such states, and in the resources required to provide those services" (MacStravic, p. 5). From this perspective, there are three types of health care needs or conditions, which once determined, reflect services warranted by these needs or conditions. These conditions and related services are expressed as the types of health care needs that must be determined by planners:

1. Health maintenance/promotion--need for basic health maintenance services generated by normal physical development (and the aging process);
2. Acute morbidity--need for acute health services generated by incidence of specific episodes of disease or trauma;
3. Chronic morbidity--need for chronic health services, generated by the prevalence of chronic disease and disability (MacStravic, pp. 58-59).

Several methods and models have been developed to determine the health status of a population, determine the desired health status, and plan to fill the gap between current and desired health status. A modified version of MacStravic's model is detailed here for Navy Medical Department planners. (Juran's model is presented in attachment V). MacStravic's model emphasizes four techniques: population survey, demographic analysis, utilization assessment, and consensus reaching. These four techniques can be used in combination to assess the three different kinds of health care needs described above:

1. Population survey - total population or sample members contacted to determine by interview or examination the actual health condition of each member. Some applicable methods follow from Juran's section on methods for discovering customers' needs (pp. 97-101). These include: 1) be a customer--use the product to acquire first-hand experience, or alternatively, through experiential training at the points of customer contact; 2) communicate with customers - generally customer-initiated contacts and is mainly a source of information about customer dissatisfactions; 3) market research - to provide answers to questions about product features, competitor products, etc. Patient satisfaction surveys are an example. DoD is developing a tri-service patient satisfaction survey and JCAHO standard LD.1.3.1 states: "The organization gathers, assesses, and takes appropriate action on information that relates to the patient's satisfaction with services provided."

After collecting the needs data, translate the needs into planners' language.

2. Demographic analysis - estimates use the reported morbidity found in a study of one population and extrapolates them to another population on the basis of its demographic characteristics. Sources of morbidity data include Sherikon, Inc., which has compiled an extensive report of sources of morbidity data, methodologies for determining patient care needs and other planning methodologies. A detailed outline of the Sherikon report, in addition to selected pertinent excerpts is from the report are provided in Attachment III. Health, United States and Prevention Profile, produced yearly by DHHS, provides a very useful summary of health, morbidity, mortality, treatment and disease prevention trends. Advance Data is a periodical also produced by DHSS that reports on morbidity and treatment findings resulting from surveys conducted by the National Center for Health Statistics. The Department of Veterans Affairs has developed Health Services Inpatient and Outpatient Planning Models (See Attachment III for overview of the model.).

3. Assessment of Utilization - Actual, Ideal and Expected Actual utilization (historical usage) is addressed as demand in the section V of this document. Measurement of the extent of services desired to maintain normal health in a population should be based on the demographic characteristics of the population itself. (MacStravic, pp. 16-17). Attachments IV and IV, respectively, list data banks and classification systems useful in gaining utilization statistics.

Ideal utilization includes the number and types of services which ought to be utilized by a given population. It is useful only as a target of limit for planning because this information alone as a basis for allocation of resources would result in large numbers of under utilized resources and unacceptably high costs for care. It is equally inappropriate to plan resources on the basis of historical use without evaluating the appropriateness of the use.

Expected utilization is an estimation of the level of utilization that will result from analysis of actual and ideal usage checked by an evaluation of the appropriateness of the forecast based upon the expected amount of success in modifying behavior of consumers and providers as the result of direct intervention.

The determination of future utilization of health services forecasts both the demand likely to occur with no intervention, and potential use likely to follow from a specific intervention....In effect, three future conditions must be forecasted: what the future would be like if nothing is done to change it; what the future should be based on estimated conditions in the population; and what the future will be if action can be carried out to improve it. (MacStravic, pp. 108-09)

4. Consensus-reaching. During this process, gather a group of concerned and qualified health professionals and ask them to agree on the extent of need in the population and what portion of the health care need is to be met by the health care system. To be most successful, the consensus-reaching should be based upon an extensive analysis of the data and information collected during the activities a., b., and c. above. Health professionals seeking to reach a consensus should be guided by the principle that: in effect, a service is needed when it is generally accepted that persons in a stated condition of health would significantly benefit from such a service.

D. FORECASTING. MacStravic lists five categories of forecasting which are detailed in attachment II.

E. INTERVENTION. Health promotion and preventive medicine are the medical tools of intervention directed towards reducing the incidence of disease and need for health care services. When projecting utilization, consideration must be given, not only to resources required for intervention efforts, but also the anticipated amount by which a successful intervention program will reduce the need for episodic and chronic health care and when the corresponding reductions in resources may be made. Preventive services can be applied at several stages. Primary preventive services relate to preventing the occurrence of disease or injury before it develops. Secondary services refer to the early detection and treatment of risk factors or preclinical disease which when altered or treated reverse, halt, or retard the progress of a condition. Tertiary services are those services and health maintenance activities undertaken after the onset of disease or occurrence of injury which can minimize complications and limit disability.

An evolving trend is that "the annual 'checkup' is being abandoned in favor of a periodic health examination targeted at prevention, detection, and treating specific diseases or risk factors for difference age, sex, and high risk groups." (Sherikon, from Davis, et al., "Paying for Preventive Care: Moving the Debate Forward." Sherikon offers an example of Periodic Health Examination Packages. (See attachment III.) . Occupational Health is also an important part of maintaining a ready fighting force.

Physical fitness, health protection and disease prevention are essential elements of any occupational health program, as they are for the Department of the Navy. As the nation's largest employer, the federal government is concerned with the health of employees for human relations reasons and to avoid or minimize the problems associated with absenteeism, early retirement due to disability, and the decline in individual performance due to health problems. (Sherikon, SOW #3, Sect. II, p. 6)

E. HEALTHY PEOPLE 2000. Any comprehensive health care planning in the decade of the 1990s must consider the Healthy People 2000 initiative. It has three broad goals: 1) increase the Span of Healthy Life for Americans, i.e., increase the number of Americans who live long and healthy lives; 2) reduce the health disparities among Americans, i.e., improve the health of population groups that now are at highest risk of premature death, disease, and disability; and 3) achieve access to preventive health services for all Americans, and address the barriers to primary health care and clinical preventive services. Prevention, in the context of the Year 2000 initiative, has three major components: health promotion, health protection, and preventive services.

At the MTF level "local delivery of care and centralized monitoring, a significant portion of this initiative [Healthy People 2000] is the identification by the services and MTF commanders of baseline data to measure the actual effectiveness of these programs" (Sherikon, from Health Promotion and Disease Prevention for the Military Health Care System (Coordinated Care Program Concept Paper, 1991). Beneficiary education is another important part of Health Promotion. One of the important guidelines is the DoD/HA Coordinated Care Program Guidance Memorandum No. 6, Provider and Beneficiary Education.

F. NEEDS DETERMINATION FOR THE NAVY POPULATION. Several initiatives are underway that will influence the provision of health care to Navy beneficiaries. Among these are the following: 1) Corporate measures of effectiveness (MOEs) being developed for Navy Medicine; 2) Health Affairs development of product lines, starting with an QB Product Line; 3) Health Affairs development of policies addressing health care for women as a top priority of the Department of Defense, including guidelines regarding adequate access and timely notification of mammography and Papanicolaou smear results, and the availability of obstetrical and gynecologic appointments for active duty women and epidural analgesia for normal vaginal deliveries (HA Memorandum 12 of Jan 93); 4) development of clinical practice guidelines (CPGs) based upon evidence-based methodology by the Committee on Disease Prevention and Health Promotion (MED-24B draft decision paper of 10 Nov 93); and 5) the managed care program, the success of which rests upon the management of care to meet the prevention and health care needs of patients.

G. IMPLICATIONS FOR STAFFING. Community (Catchment Area) Needs - On a community level, health needs become resource needs. An individual may require a visit to a doctor, an injection, an operation, or a stay in a hospital. The community needs a certain number of physicians and hospital facilities to meet individual needs. Planners should try to predict the numbers of units of service likely to be used for each type of health service and for the population which is identified as its constituency. The desired level of use for each service ought to be determined on the basis of the incidence and prevalence of situations accepted as calling for the use of given services. In general, such situations will fall into one of the three categories: health maintenance, acute morbidity, or chronic morbidity." (MacStravic, p. 15).

Combine data derived from the needs analysis with demand data and review for appropriateness and feasibility, to include considerations of resource availability, policy considerations and modeling. The output of this effort is determination of what medical services are to be provided, to whom (customers), and by whom (staffing). The following references, provided in attachments VI and VII, respectively, offer two useful models to assist in determining staffing: "The Primary Care Model for Future Staffing Needs of the Navy," and "Comparison of Navy Hospital Physician With Health Maintenance Organization (HMO) Staffing For the Same Beneficiary Population." They will be discussed further in subsequent sections of this guide.

ENCLOSURE FOUR

The Primary Care Model for Future Staffing Needs of the Navy

In order to survive into the next decade, Navy medicine must take on priorities similar to those of national health reform while still maintaining the ability to meet its operational mission. While specifics of the civilian plan remain unconfirmed at present, there are some general trends that few would dispute as given.

Primary Care Defined

Primary care will be the focus and the controlling force behind delivery of high quality, cost effective health care. The term "primary care" has been defined several ways in the past. It is not a designated specialty as defined by any board certification process. It is a general term to describe an array of health care services distinguishable from secondary care (inpatient), tertiary (specialized inpatient) or specialty care (inpatient or outpatient care provided by physicians with more extensive training to patients with more severe illness/injury).

Primary care is generally considered ambulatory. The term is used to describe the initial access point for patients to enter the health care system. The contact could be for routine, health maintenance services such as physical exams and immunizations; or for treatment of minor acute illness. A primary care provider would also provide ongoing care for chronic diseases. The point at which a patient transfers to a specialty care setting from the primary care one depends on the severity and co-morbidity of the illness, the training and experience of the primary care provider and the limitations of the facilities and technology in the primary care setting.

All would agree that the term "primary care" includes at a minimum, Family Practice, General Internal Medicine and Pediatric services. In the Navy, primary care also includes GMO physicians who are graduate physicians who have not yet completed residency training programs that will further define them in a given specialty.

Depending on program focus, others have added Obstetrics-Gynecology under the heading of primary care. Though this type of care may be the point of access for many women seeking ambulatory, minor acute care and it does have components of health maintenance in it (breast exams, Pap smears), the specialty has too narrow of a focus on too narrow a segment of the population to be considered for our purposes.

Ob-Gyn has really only been considered a primary care specialty in discussions of primary care shortages where an attempt is made to address some of the unmet demand (since they can provide some primary care services). It also comes into play where patients are not otherwise assigned to a primary care provider and need to find access into the system.

When planning for comprehensive care comes into play, inclusion of

Ob-Gyn specialists makes less sense. There is a relatively higher cost for these specialists to perform low complexity services (routine exams) that could be accomplished in the generalist primary care setting. Keeping the care at the Primary Care setting would result in more cost effective services with no decrement in quality. Moreover, it could be argued that the quality improves because one provider performs and monitors the status of all recommended exams and health preventive measures.

Some studies of primary care staffing patterns have included Occupational Medicine physicians as primary care providers. While this may not be as significant for civilian health care reform, in terms of the Navy's priority for active duty care and the unique environment of the operational forces, occupational medicine may indeed be critical to maximizing appropriate resource use. In the active duty operational setting, as well as in civilian employee settings such as shipyards, many of the federal safety requirements (OSHA) require medical oversight. Because of the special nature of the setting, more extensive use of Occupational Medicine physicians may be called for. Maximum efficiency may dictate extensive use of Occupational Medicine technicians at the IDC training level to achieve a workable model. Unfortunately, the availability of such providers is probably as constrained as it is for other primary care specialties.

Models for Future Staffing Needs

In the past, DOD medical staffing studies have used historical workload as statistical forecasts of future need, or they have focused on current ways of delivering care in planning for future workload. Neither of these methods is meaningful anymore.

If we accept that primary care controlled health care of defined populations is the future for us, then it is logical to look at the history of those types of systems, i.e., the HMOs. The premise is that primary care supports preventive care and controls access to high cost specialty care. The premise has been validated over many years of successful HMO operations that typically have both reduced medical care premiums and reductions in hospitalization rates.

A recent literature review spanning 23 years of studies indicated that though there are some variation in numbers, the ratios of provider to patients by specialty are remarkably similar among the largest HMOs. Enclosure (1) is one study that examined these factors. Enclosure (2) contains data from other sources. It is useful to use several sources since one study may examine specialties in more detail than others. This information is important in helping us plan for future staffing based on population forecasts.

The first study in enclosure (1) used both total and adjusted RAPS population data. Adjusted figures reflect factoring out of those eligible beneficiaries who did not use the direct care system, but used CHAMPUS instead. We can assume several major reasons, including: insufficient capacity at the MTF, barriers to access

such as appointment times or geographical factors, and such intangibles as dissatisfaction with the direct care system. However, comprehensive health care planning for the future must include all beneficiaries. Whether the care is provided in the direct care system or through a managed care network, we can expect to achieve more economies of scale if we maximize the market leverage of our large population groups and consolidate services where possible, whether it is in direct care or in an outside arrangement.

Enclosure (3) represents the methodology used in Enclosure (1) as applied to the RAPS population data for 1999. The projections show only total population figures; BRAC III is included. It is painfully obvious that we have a severe shortage of primary care physicians, which is the same dilemma faced in civilian health care reform projections. We also share the mismatch and apparent over supply of specialists in some cases.

Methods to Address the Primary Care Shortage

Competition

Competition for primary care providers will be acute. The military may, as it has been in the past, be at a disadvantage because of salary discrepancies for providers. However, the impact of the civilian health care reform shake down may actually improve recruiting of physicians. Civilian salaries have been reduced already because of Medicare coding reform and the proliferation of managed care plans demanding discounts. As a result, the salary tolerance levels have been altered.

Moreover, in the past, military medicine has competed with the lure of the private practice setting that was both lucrative and very appealing because of its independent nature. Oversight of practice patterns and various forms of utilization management have reduced the independence factor and raised the hassle factor such that many physicians have thrown in the towel and assumed salaried positions.

In the future we will be competing with entities that look very much like we do. Managed care organizations looking for contractual arrangements (PPO model) or in house salaried positions (staff HMO model). We may also be competing with capitation based plans.

Recruitment

Every method of increasing primary care physicians has a time factor and a financial component associated with it. Recruitment goals must be realistic. What will it take to bring in a fully trained primary care physician from the civilian sector? What will the competition (other managed care plans) be offering him/her? We need to consider the differences in our unique environment that might appeal to physicians considering multiple options.

Beyond that the Navy can attempt to offer training dollars to attract medical students as it has done in the past. Even more

time and money must be factored in to reap the benefit of a new physician coming out of the "pipeline." Because of the high cost of medical education, which is not projected to decrease, subsidization of the education process is a strong incentive for many medical students.

Re-training

Other options need to be considered that require less time and money. One method frequently mentioned is "retraining" of specialists. It may be possible to retrain a physician in a period of one to two years with a hybrid program specifically designed for the military. Specialty board certification in Internal Medicine or Family Practice may not be possible, however, unless the critical shortage results in a redefinition of board certification requirements in the civilian sector.

A more promising scenario that would prove more useful to both the military and civilian health care sectors would be the development of a new specialty of "Adult Primary Care" specifically targeted for retrained physicians with its own board certification requirements. To reduce training requirements, the certification process could grant credit for previous training and experience. The new specialty would be for adult primary care only, thus negating the need for training in pediatrics and Ob-Gyn, as is currently required in Family Practice. The scope/depth of the training could be reduced somewhat to focus more on ambulatory rather than inpatient care, thus reducing requirements as in critical care management in Internal Medicine certification.

Physician Substitution in Manpower Models

The military has used non-physician health care providers for many years to supplement clinical care staffing needs in the system. Included in this group are Physician Assistants, Family Nurse Practitioners, Pediatric Nurse Practitioners, Ob-Gyn Nurse Practitioners, Nurse Midwives, Nurse Anesthetists, Podiatrists and Independent Duty Corpsmen. The numbers, distribution and recruitment efforts have varied depending on medical department priorities, size of the fleet and related needs, and the politics of those in charge at the time. The physician extenders have competed for precious few billets with other corps. Often, protection of corps turf and current politics took priority over concerns for the most cost effective and meaningful ways to meet the clinical needs of our beneficiaries. We can no longer afford to be so shortsighted.

Independent Duty Corpsmen

If we start with a "bottom up" review of the health provider continuum, we begin with the provider with the shortest training line, that costs the least amount of money to employ and has the most restrictions on how they function. The IDC is trained to triage and treat minor acute illness/injury, recognize major problems requiring more specialized care and occasionally do all of this in complete isolation from the outside world, much less the

medical world (as when the submarine is submerged and on patrol).

Any physician will tell you that a large portion of outpatient clinic visits consist of routine care. Whether it is annual physical exams of healthy people or treatment of a cold, the level of complexity is not high. The more highly trained a provider is, the more likely they are to be bored with a large number of these types of visits. If the system has the ability to control access into and direction through the health care system (as we do in the Navy), then it can maximize use of low cost providers where appropriate.

In addition, routine physicals while a major focus in the HMO model for maintenance of good health and early recognition of problems, is often the least available service in the military system. Because of acute staff shortages historically, the medical care availability to dependents and retirees has frequently been limited to treatment of acute illness/injury and follow up for chronic problems. Therefore, if the military system adopts the HMO/primary care model it must be able and willing to devote resources to the critical element of the HMO model; that is, health maintenance. If this does not occur or only happens partially, the result will be a huge investment in resources without the cost savings of an efficient and effective system designed.

Expanding the role of the IDC would be a logical first step in altering the staffing picture. Since the IDC is already equipped to deal with minor illness/injury, the next step would be to change the curriculum to include physical exams of normal, healthy people. The quality of that care could be further assured by restricting the patient population to adults between 18 and forty. This would factor out pediatrics and older adults who tend to have more serious illness and necessitate more referrals to higher levels of specialty care. Focusing on such a narrow segment of the population would produce low cost, highly effective health care providers who could assume care of a significant portion of the healthy population.

The military health care system has some incredible latitude in program design because of its mission. There is increasing oversight by outside agencies (e.g., JCHO), but we remain relatively free to do whatever is reasonable and necessary to accomplish the mission. Where else could you find the concept of an Independent Duty Corpsman (IDC) who functions as sole provider in an isolated environment such as a submarine? It is just this sort of creative strategy that we need to encourage, support and engender in our health care planners so that we may survive in the years to come.

If a new distribution and utilization for IDCs is undertaken, new manpower modeling must be developed. Since there are not comparable health care providers in the civilian sector, previous studies may not be available. Discussions with IDCs and physicians who have worked with IDCs would be helpful in developing models. It

may be reasonable to start with the substitution models used for Physician Assistants and reduce the delegation factor further to reflect the lower training model.

The other option is to define their use not in terms of a substitution for a physician, but rather as a substitution for certain elements of physician care. This may be the more appropriate model in a dependents clinic setting. In other words, the physicians would be the "team leader" for patient care, but would delegate physical exams, immunizations and history taking to the IDC. More experienced IDCs could function more independently as their situation dictates.

Physician Assistants

As we proceed up the continuum of health care, the next level is the Physician Assistant. The Physician Assistant program was instituted 26 years ago in response to a shortage of physicians. As the specialty evolved, so did the applications for its use. While we find PAs in general and subspecialty Internal Medicine, we also now see Master's level training in general and orthopedic surgery and emergency medicine. These three specialties have typically been very difficult and expensive in terms of physician recruitment. The Navy has tremendous potential to reduce costs for the provision of those services with extensive use of lower cost PAs.

While the literature contains information on substitution models for use of PAs in primary care, none was found for their use in surgical and emergency settings. In the primary care setting, it is estimated that between 60 and 90 percent of the care (depending on the study) can be delegated to a PA. A 1983 study by the Air Force (which may be the most comparable to Navy) concluded that the most efficient staffing ratio of PAs to physicians is 2 to 1 with maximization at a model of four physicians to eight to nine PAs. They concluded that this model reduced personnel costs 20% over an all physician staff.

Unfortunately, the success of the PA program has driven up the salary levels in the civilian sector as well as the competition for jobs. The average starting salary is \$37,000-44,000 and there are eight positions for every new graduate. The Navy must, therefore, gear up quickly to institute tuition reimbursement programs to get the supply to the required level.

Family/Adult/Pediatric Nurse Practitioners

Because Nurse Practitioners function in roles very much like that of the PA, many are confused as to the difference. Some would say that the two providers take different routes to arrive at the same point. While the basic certification of a PA requires a two year program (an associate degree is not first required in the civilian sector, but it is in the military), Nurse Practitioners typically complete a Master's degree for certification and licensure.

There are some very basic differences in training that will dictate

the roles they are able to fill in military medicine. As the name implies, the Physician Assistant is truly a "physician extender." They are licensed only to function under the supervision (which will vary depending on the expertise of the PA) of a physician. Nurse Practitioners, on the other hand, are licensed as independent providers of care. Their focus is the health/wellness model of care and emphasis is placed on education and counseling. If the Navy is to truly adopt a HMO model of care, then resources to support health maintenance must be invested. The Nurse Practitioner would therefore, become central to that system. Not only are they a lower cost alternative to physicians, they are already fully trained in the "health" versus "illness" concept of medical care.

The average starting salary for a hospital based Family Nurse Practitioner is about \$35,000. A nurse with a BS degree can be licensed as a Nurse Practitioner with a Master's degree with two additional years of training.

Variations to the Family Nurse Practitioner include the Pediatric Nurse Practitioner and the Adult Nurse Practitioner, both of whom have a more narrowly defined focus of training.

To maximize use of the available options for delivery of health care, the Navy model should therefore be health maintenance driven with extensive use of Nurse Practitioners in concert with primary care physicians. If we assume a delegation factor of a conservative 60% then a rough estimate would be 3 Nurse Practitioners for every 2 physicians. Unfortunately, in most Navy clinics Nurse Practitioners exist only as one or two providers among many more physicians. A study should be conducted with Nurse Practitioners as it was with PAs to analyze the maximum substitution theory.

Physician Assistants would seem to be better equipped to handle the acute care clinic or sick call setting in primary care, rather than as providers of routine health maintenance services. In addition, they could be used to extend the productivity of physicians in surgery and orthopedics.

----ob NP, CRNA, Nurse Midwife

Military Specific Considerations for the Primary Care Model

Although civilian experience and manpower models are useful for basic planning for the military health care system, special considerations do come into play. Some of these factors constrain us further, while others allow increased flexibility over our civilian counterparts.

Constraints

Constraints include operational requirements that both take providers to sea for long periods and for temporary assignments. This affects the pool available for CONUS assignments. OCONUS MTFs have special needs because of geographical and medical isolation. Less tangible constraints include military specific daily

obligations that affect productivity at both the individual and clinic level.

If a comparison is made of the productivity between military and civilian physicians, the more tangible aspects would include ancillary, facility and management support. In the Navy, our physicians have little of any of the above.

Because of billet limitations, we expect our physicians to share nursing support personnel with multiple others. A private practice physician would likely have one nurse whose sole job is to help him/her see patients, handle phone calls, keep supplies stocked and provide patient education/counseling. That person might be an RN, LPN or CNA which would dictate the amount of work that could be delegated to them. The physician would also have partial FTEs to do the following: respond to requests for information from other physicians or insurance companies by reviewing medical records and making copies, fill out all the paperwork for signature, manage prescription refill requests, type dictated summaries of patient visits and file and follow up on insurance claims and patient billing.

More importantly, a well run practice also has a professional manager (bachelor or master's level) who handles the daily multifaceted nature of the administrative burden thus allowing the physician to see patients more efficiently. Although, many of the administrative requirements of running a clinic/practice are not present in the MTF clinic, the fact remains that our physicians are not supported to maximize efficiency.

A professional degree does not, however, assure a well prepared ambulatory manager. With increasing attention to ambulatory care, the military should consider changing the curriculum at the service schools to provide more practical training in clinic management to MSC officers, thereby freeing the NC to manage the clinical support side.

The third critical element is facilities. In a private practice most physicians operate with 2-3 exam rooms, some operating quite well out of 5 at once, depending on the patient mix. Our Navy physicians are lucky to get one and sometimes are expected to share it. The exam room may be down the hall from the office and many more steps from the central nursing area and patient registration.

Without benefit of nursing support, office facilities, a typed medical record and a clinic manager, it is no wonder that outpatient volume differs from those in the civilian environment. Then again, we are not able to accurately measure the volume difference since we have no measurement system. Without such a system, we cannot show providers what they have done as compared to the civilian system or what is expected of them

Flexibility in the Military System

There are some advantages to the military health care system that

allows certain freedom in designing a model for the future. We have a degree of control over health care providers that definitely exceeds that of fee for service plans and perhaps somewhat more than even the HMO model.

The military has always enjoyed special exemptions from state and federal laws that dictate delegation of clinical care to alternate providers, as is the case with IDCs. We also have the ability to shift providers from one location to another to respond to short, medium and long term manpower shortages.

The military has the power to design and deliver whatever model of care it deems cost effective as long as it meets the basic provision of care dictate. That form can be in-house military providers (physician and non-physician), in house contract or partnership providers or community civilian contract plans.

Other Differences for the Navy Population

Other factors come into play in terms of both design and implementation of the primary care model. It must be pointed out that some of the cost effectiveness of the successful HMOs is based on their ability to screen out unhealthy (unprofitable) subscribers. While we cannot do that for the beneficiaries we serve, we also have a large portion of healthy active duty members that may serve to balance it out.

Another demographic factor for the active duty population is a possible increased utilization for specialties such as orthopedics since they are an active group. Special focus on occupational stress factors, as well as related problems in family dynamics may produce an increase in psychiatric care needs. In addition, we do not limit the amount of psychiatric care as some civilian insurance plans do.

Special environments such as nuclear submarines and aircraft dictate the addition of unique subspecialties such as radiation health, undersea medicine and flight surgery. Much of this active duty care is performed at the occupational point of service, thereby reducing demand in the hospital or branch clinic service sector.

Because of added control of our active duty population we can achieve higher levels of compliance with recommended services such as immunizations. We may or may not be able to affect patient compliance rates with other regimens.

Designing Measurement Tools

Many have recognized that the MEPRS system has many limitations as a useful tool to measure productivity. Because it was designed as military in nature, it is by definition too narrow in focus and not relevant to the outside world. In order to support decision making, a new tool must be workable, meaningful and equate to

civilian measures of productivity.

As a test, data from the NH Charleston Third Party Billing system will be analyzed. Providers in the Internal Medicine Department fill out encounter forms on all patients (including active duty, dependents, retired and Medicare eligible) for all visits. The physicians then code the visit using CPT codes that include evaluation/ management codes and procedures such as echocardiograms. Collection of this data mirrors what an Internist in private practice records in order to submit claims to insurance companies. Therefore, we use the same data base to reflect the work accomplished.

CPT codes have an added advantage in that the perceived value of the service (for reimbursement) is reflected in the Relative Value Units (RVU) associated with it. For example, the CPT code of 99202 is for a Level 2 Office visit and has a higher RVU and a Level 1 visit, 99201. We can then take the spread of frequencies of each code for each provider (and in aggregate for the clinic) and get a picture of the number and complexities of the services performed over a given period.

Using the overhead portion of the MEPRS coding system (with physician salary factored out), computing values for each CPT RVU and adding specific salary rates for each of the physicians we should get an idea of the cost of providing those services. We can then assign a value for the services for that clinic in that facility at the CPT code level.

The same CPT coding system is the basis for CHAMPUS reimbursement. We can compare the CHAMPUS cost of purchasing that service in that geographical region with the cost of providing it in house. Complicating factors will include variances in volume based on unrelated factors, such as facility and support staff constraints; coding variances associated with training and personal motivation to code accurately. CPT codes drive revenues for civilian physicians and they are also the basis for charges of fraud if found to be upcoded in chart audits.

Distribution of Resources

If we develop a meaningful measurement system that allows us to compare the cost of providing in house services to the cost of purchasing those costs, we can then begin to analyze the data to determine the the most efficient distribution of our resources. Each catchment area will have to be computed separately.

In the past, we have consolidated our specialists into a few institutions to maximize their use and to account for more difficulty and cost in recruiting them. Under the primary care model, we know that specialty physicians will focus on the more complex care and delegate the routine to the primary care physicians. We know that under existing models it appears that the Navy is currently over staffed in some specialties. What we do not

know is how the cost of the specialists will change over the next eight years.

Will the vascular surgeon still be so highly compensated as a civilian that recruitment will be difficult? Or will the national health care reform movement also focusing on primary care decrease the demand for those services to the point that it drives those salaries down? Will the demand for civilian primary care providers be so extreme that they cannot be recruited easily?

These are the critical questions. If, however, the staffing models are in place and the cost benefits analyses validated, we need only to plug in the figures to reach a "provide" or "buy" decision for each facility. No often how much or how often the variables change we will have data to help make those decisions for today and for tomorrow (making certain assumptions and projections for the future).

The basis of the decision making must be geographically specific to account for differences in cost of living, cost of facilities and land, availability and cost of providers and competition for those providers.

The data may show that the Navy can best fill its role by providing only primary care in house and purchasing all subspecialty care (inpatient and outpatient). It may be global or it may vary dramatically by facility. We may see only a small portion of urgent primary care performed in the MTF with all the rest purchased while much of the existing specialty care stays in the MTF. Purchased care may be provided in MTFs or in civilian facilities. Purchased providers may work in our MTF or in their civilian setting. The Navcare concept may become the prime model that is adopted.

Our traditional assumptions about staffing models may have to be altered to maximize resources. For example, we often assume that though the workload demands only one provider, we must provide two to allow for rotation of night coverage. We might also consider purchasing "pieces" of care, whereby, we contract with a civilian provider to do nothing other than provide after hours coverage. That service might occur in our facility or ours. Depending on how "hungry" that provider is, we might save a tremendous amount of money while rescuing a second military physician from terminal boredom and under utilization.

If we truly embrace total quality leadership, we must consider all possibilities no matter how foreign they may be to the usual way of doing things. Personalities, corps competition and private agendas must be down played in favor of logical, thoughtful and analytically based and management decisions.

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Average MD to population ratios for 10 HMOs

GP	1:2544
Gen Surg	1:13,333
Int Med	1:2544
Ob-Gyn	1:10,526
Peds	1:6,666
Primcare total	1:1,402
Ortho	1:28,571
Urol	1:52,631
ENT	1:38,461
Derm	1:38,461
Allergy	1:76,923
Psych	1:23,809
Radiol	1:27,777
Anesth	1:35,714
Ophthal	1:35,714
Pathol	1:66,666

Kronick, Richard PhD et al. "Special Report: The Marketplace in Health Care Reform-The Demographic Limitations of Managed Competition." New England Journal of Medicine, Jan 14, 1993, p. 148-52.

LeRoy, L. The Cost Effectiveness of Nurse Practitioners. Washington, DC, Office of Technology Assessment, 1981, Case study no. 16.

Loe, M.M., LT, MSC, USN, Specialty Advisor for Physician Assistants, Telephone Interview, 8 November 1993.

Mulhausen, Robert MD and McGee, Jeanne PhD. "Physician Need: An Alternative Projection From a Study of Large, Prepaid Group Practices," JAMA, April 7, 1989, vol 261, no. 13, p. 1930-4.

New England Journal of Medicine. vol. 314, no. 4, p. 217-22.

Physician productivity in terms of ambulatory visits per

FTE MD per year in 3 prepaid group models and in the GMENAC study:

		# Visits	
		FP	Int Med
Gmenac	Peds 5865	5520	3680
Maxicare	6067	5464	3627
MedCenters	4734	3988	2903
Harvard	4215	----	2840

Perry, C., CAPT, NC, USN, Assistant for Policy and Practice, Nurse Corps, BUMED. Personal Interview, 9 November 1993.

Poirer-Elliott, E. "Cost Effectiveness of Non-Physician Health Care Professional." The Nurse Practitioner, 1984, 9:10, p. 54-6.

Contains a cost effectiveness formula. Estimate average MD salary less average NP salary plus cost of supervision (at 10% of MDs salary) to reach cost difference. Need to further factor in higher cost of MD education. States that 80-90% of services can be delegated, NP/MD substitution ratio of 0.63, NP/MD cost ratio of 0.38. If NP is 63% of work of MD at 38% of cost then savings to employ NP =24% (0.63 x 0.38)--these used old salary numbers.

Record, J. C., Final Report: Cost Effectiveness of Physician's Assistants in a Maximum Substitution Model: Phase II of a Two Phase Study, Washington, DC, Government Printing Office, Aug 75-Oct 76, (DHEW Publication no. (HRA) 67-1). <T995>

PAs reduce costs significantly. Can save 15% of its MD costs in primary care for adults if fully exploit substitution of PAs for MDs

Record, J. C. Staffing Primary Care in 1990: Physician Replacement and Cost Savings. Springer Publishing Co., NY, 1981. <W1 SP685S V.6 1981>

Author is sr economist with Kaiser Permanente. Level of delegation 80% for adults, higher in peds. Substitution ratio of MDs to NPs= .50-.75. Formula:

$$MD = \sum_i OVi(t) \frac{(1-Di)(OVi/OVt)}{Pmi}$$

$$NP = \sum_i OVi \frac{(di)(OVi/OVt)}{Pni}$$

D= % of OV(output visits) delegated
MD= # of MDs required for a given level of D
NP= # of NPs required for a given level of D
OVt= total volume of primary care OVs
Pm= average MD productivity expressed as annual OVs
Pn= average NP productivity expressed as annual OVs
i= sector large or small practices with adult and peds care treated separately within each size group

Ei= sum of all the sectors

Delegation ratio

	Large practice	Small Practice
adult	.50	.25
peds	.60	.30

Most states limit MD to PA ratio to 1:2

Savings 18-48%

Rowley, W., CAPT, MC, USN, Deputy Assistant Chief for Health Care Operations, BUMED, Personal Interview, 5 November 1993.

Rowley, W., CAPT, MC, USN, "Medical Care in the Year 2000: Predictions of Trends and Possible Health Policy Scenarios." Copy of Speech to MSC Quarterly Luncheon, 10 November 1993.

Safriet, B. "Health Care Dollars and Regulatory Sense: The Role of Advanced Practice Nursing." Yale Journal on Regulation, Vol. 9, number 2, Summer 1992.

Wennberg, David et al. "Equilibrium in U.S. Physician Supply." Health Affairs, Summer 1993, p.90-102.

Williams, C.R., HMCM(SS), USN, Chief, Hospital Corps, BUMED, Personal Interview, 8 November 1993.

ENCLOSURE FIVE

Comparison of Navy Hospital Physician Staffing With Health Maintenance Organization (HMO) Staffing For the Same Beneficiary Population

SUMMARY:

Large staff model health maintenance organizations (HMOs) are staffed with the limited number of physicians necessary to meet the needs of their enrolled beneficiary populations. There is an emphasis on using primary care providers as "gate keepers" to manage patient care in an economical way. HMOs maintain financial health by being efficient and productive. Health care reform will promote managed competition among HMOs so it is a legitimate yardstick for measuring efficient staffing in Navy MTFs.

Three studies over 23 years (Encl. (4)) show consistency in staffing among large staff model HMOs such as Kaiser and Group Health Cooperative of Puget Sound. The 1993 study by Kronick, et. al. (Encl. (4)) was used as the staffing standard for comparison in this study.

Navy hospitals cannot be directly compared to a civilian HMO for many reasons. MTFs have military-unique administrative requirements and operational obligations frequently pull staff away from patient care. Physical layout, equipment and staffing limitations prevent the efficiencies enjoyed in an HMO. Small facilities need enough physicians in specialties such as OB/GYN to provide 24-hour a day coverage even if the workload does not justify them. Military beneficiaries tend to "overuse" the MTF, especially the emergency medicine department. There is great demand for orthopedic services resulting in a several week backlog even though HMO standards would suggest an excess of orthopedists in MTFs.

Even though the MTF and HMO systems are dissimilar, certain generalizations can be drawn from this comparison:

- There appears to be an excess of surgical and some medical specialists while there is a significant deficiency in primary care physicians in the Navy.
- The total number of physicians in the Navy for the beneficiary population actually served is significantly higher than what would be necessary in an HMO. This is partly accounted for by small MTFs which need a certain number for coverage and by the Navy's contingency requirements. However, it also suggests the Navy could improve efficiency in delivering patient care.

ENCLOSURES:

Enclosure (1) - Graphs comparing the differences in MTF and HMO staffing for different groups of MTFs. Some graphs are adjusted to reflect the number of beneficiaries actually using a MTF and some account for the entire eligible beneficiary population. The differences in Navy physicians compared to HMO standards are summed to give a ~~the~~ total excess or deficiency for each specialty group.

Enclosure (2) - The data matrices graphed in enclosure (1).

Enclosure (3) - The data for each MTF.

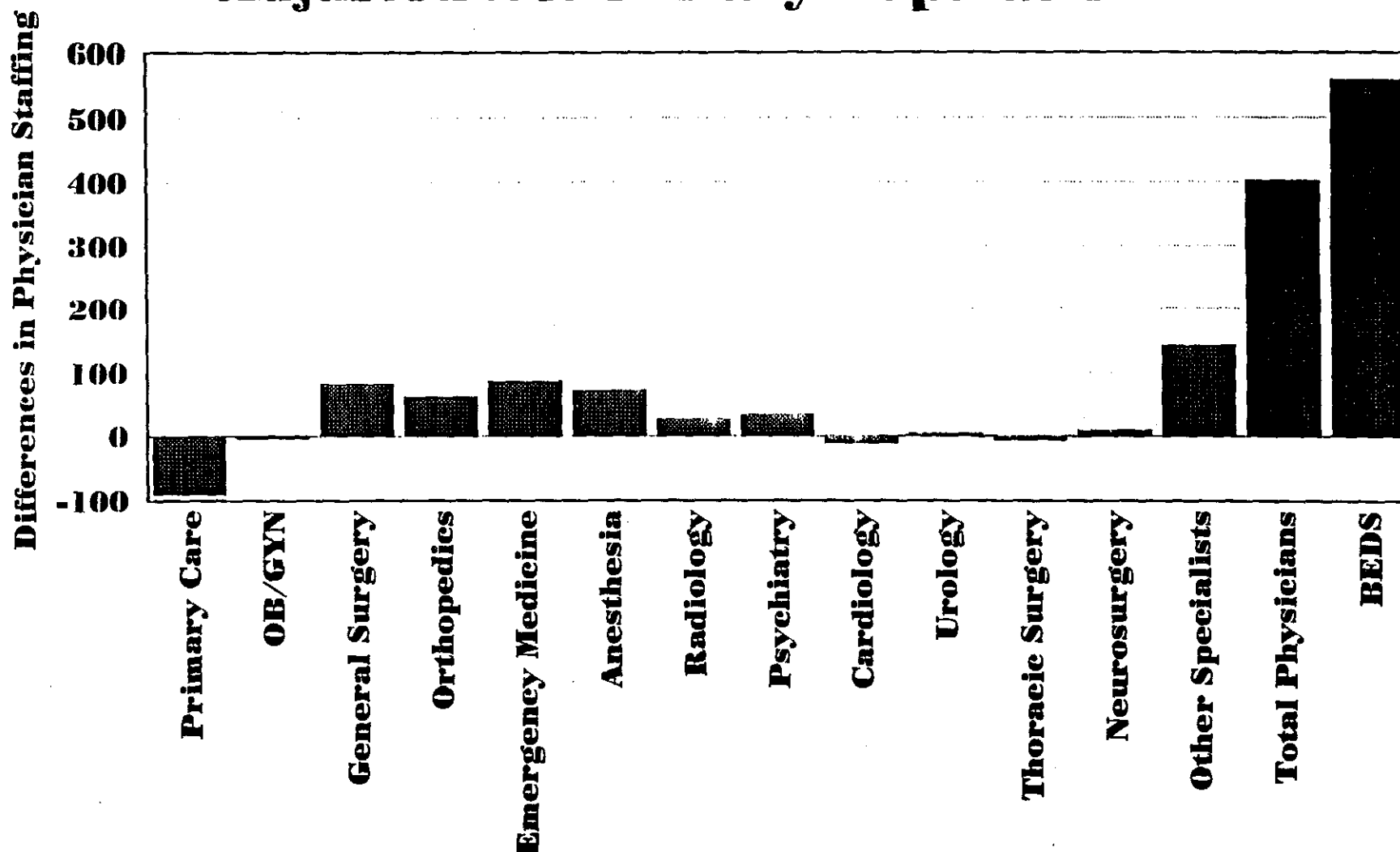
Enclosure (4) - Civilian HMO staffing standards.

9/19/93

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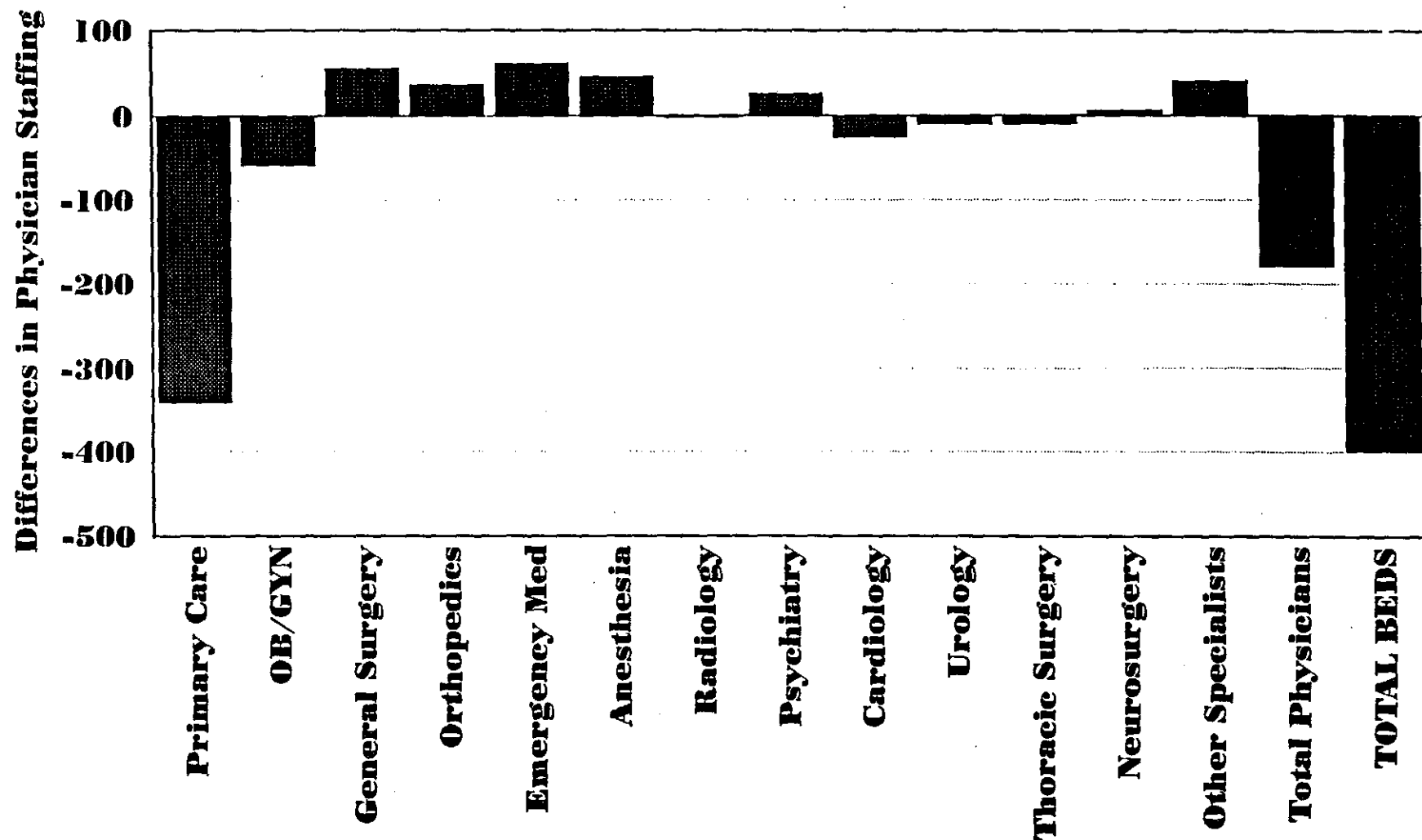
NOTE: Due to the size of enclosures (1), (2) and (3), only portions of enclosure (1) and all of enclosure (4) are provided. If you are interested in seeing all of the enclosures contact MED-81.

Physician Staffing Differences Between All Navy Hospitals and a Staff Model HMO for the Same Adjusted Beneficiary Population



Total catchment area beneficiaries corrected (reduced) for those not using MTFs for CONUS MTFs only

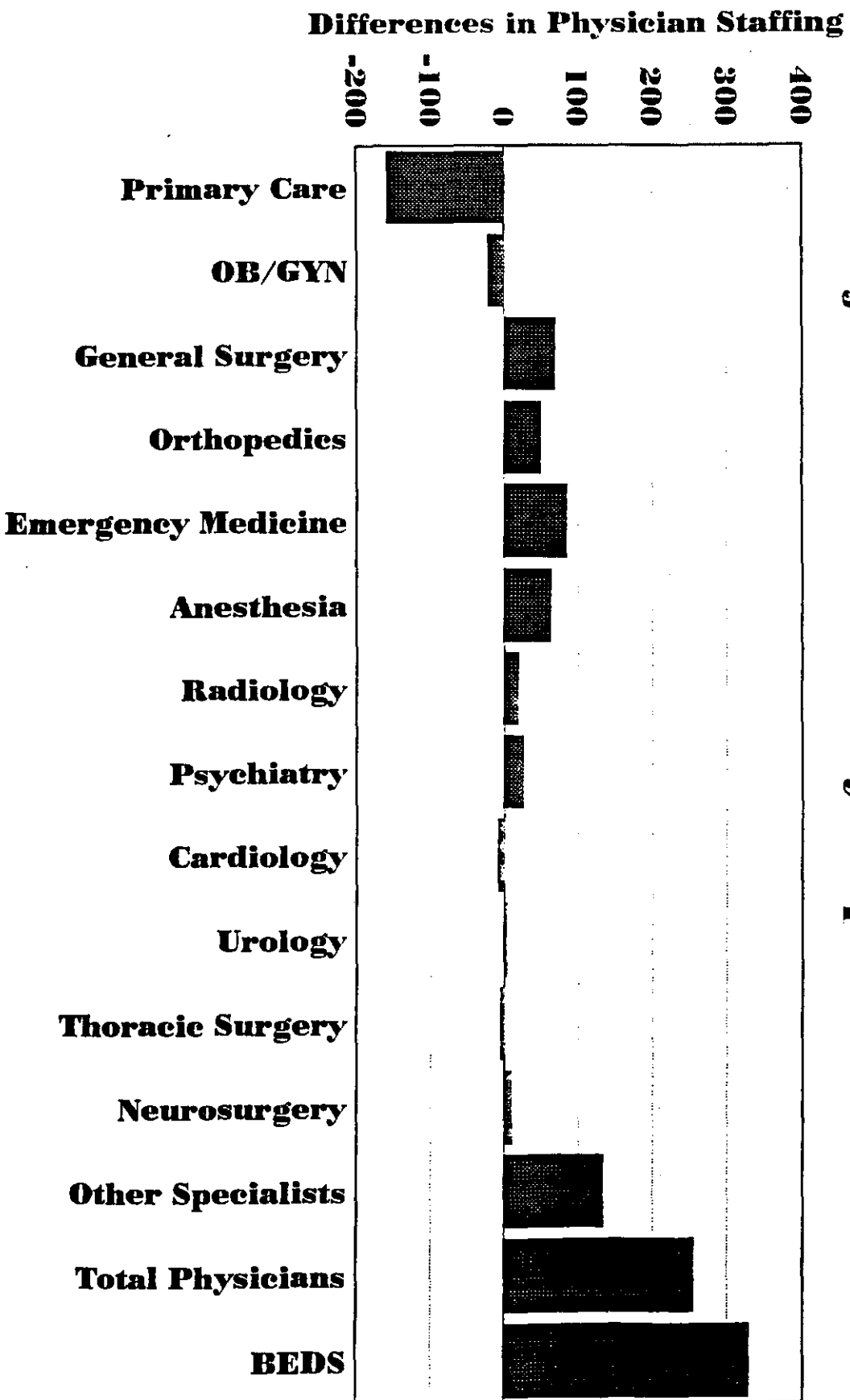
Physician Staffing Differences Between All NAVY Hospitals and a Staff Model HMO for the Same Total Catchment Area Beneficiaries



- * Includes all CONUS and OCONUS hospitals
- * All eligible beneficiaries in catchment area included

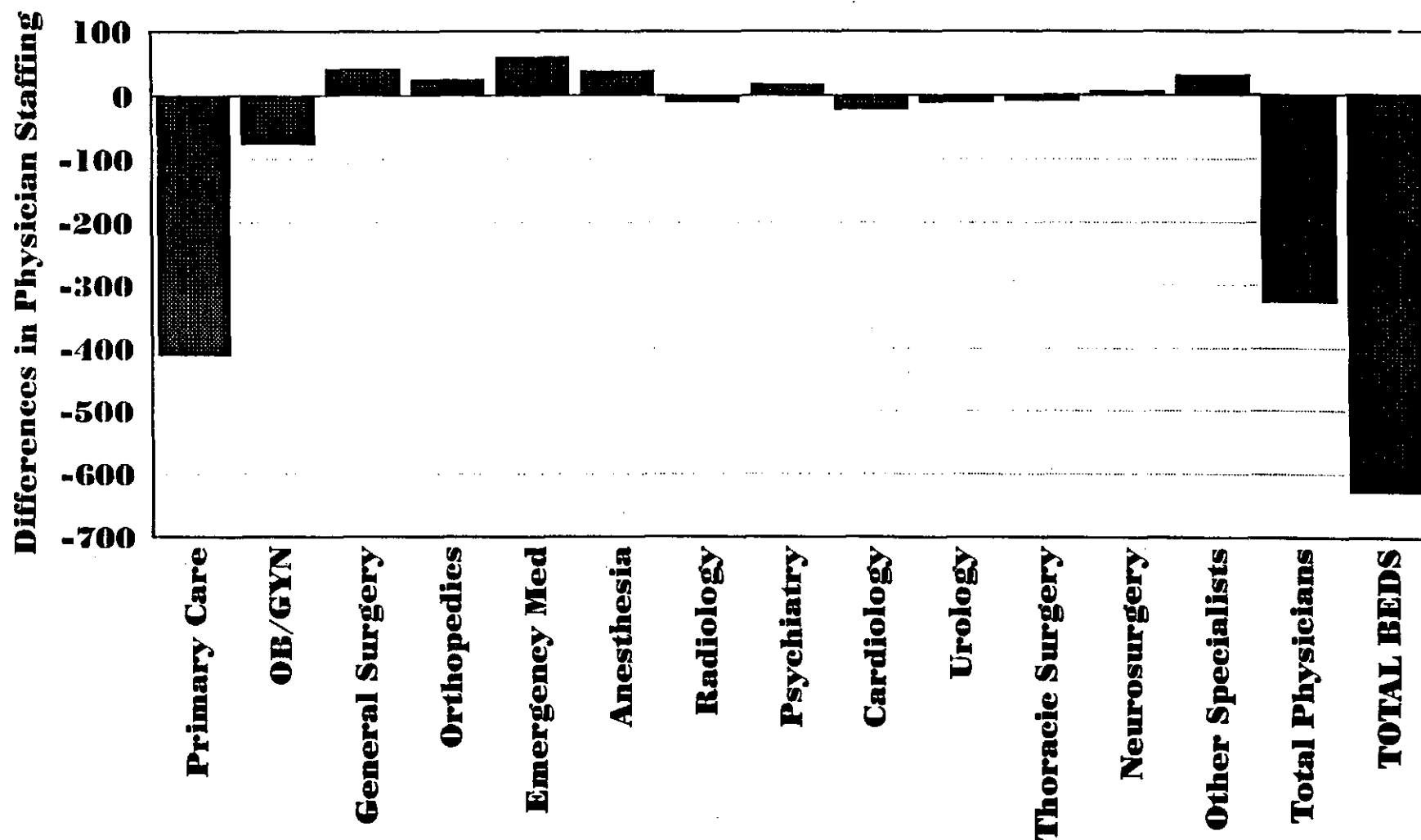
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Physician Staffing Differences Between All CONUS Hospitals and a Staff Model HMO for the Same Adjusted Beneficiary Population



Total catchment area beneficiaries corrected (reduced) for those not using MTFs

Physician Staffing Differences Between All CONUS Hospitals and a Staff Model HMO for the Same Total Catchment Area Beneficiaries



* All eligible beneficiaries in catchment area included

MED-03B

**ESTIMATED NUMBER OF FULL-TIME-EQUIVALENT
PHYSICIANS REQUIRED FOR 100,000 ENROLLEES
IN THE "CLASSIC" STAFF MODEL
HEALTH MAINTENANCE ORGANIZATION (HMO)**

PRACTICE BY SPECIALTY	1993 Study	1983 Study		1970 Study	
		Mean #	Range	Mean #	Range
TOTAL PHYSICIANS:	117.9	111.2	98.6-119.7	99.3	83.3-101.7
Primary Care/FP	50*	10.3	2.2-17.5	23.8	11.9-43.5
Pediatrics	+	14.9	12.1-21.5	17.1	9.7-22.0
Internal Medicine	+	24.8	25.9-37.7	27.3	24.3-57.1
Cardiology	2.8				
Neurology	+	1.5	1.2-1.6	0.9	0.8-1.1
Dermatology	+	2.3	0.6-2.9	2.2	1.0-3.0
Psychiatry	3.8	3.8	1.9-4.6	1.9	0.7-2.1
OB/GYN	10.8	10.7	7.9-12.8	10.3	6.9-11.1
General Surgery	5.3	5.8	4.6-7.2	8.1	5.6-12.4
Thoracic Surgery	0.8				
Neurosurgery	0.7	0.6	0.5-1.2	0.9	0.7-1.8
Ophthalmology	+	2.9	1.2-3.9	2.8	2.1-3.1
Orthopedic Surgery	5.0	3.9	2.9-4.4	3.8	2.9-4.0
Otolaryngology	+	2.3	1.0-3.2	2.2	2.0-2.6
Urology	2.5	2.2	0.6-2.4	1.6	1.0-2.2
Emergency Medicine	4.8	4.9	0.3-10.0	-	-
Anesthesiology	5.0	3.6	1.6-5.0	2.3	1.1-3.3
Pathology	+	1.7	0.6-3.1	1.3	0.7-2.1
Physical Medicine		0.8	0.3-1.3	1.0	0.8-1.0
Radiology	6.0	4.4	3.2-5.5	3.4	2.1-4.0
Other Specialties	20.3+				
Administration		1.6	0.8-3.4	-	-
TOTAL # HOSP. BEDS	200				

- * Primary care contains a mix of family practitioners, internists and pediatricians
- + Ophthalmology, otolaryngology, dermatology, pathology, hematology & oncology, neurology, gastroenterology, allergy & immunology, pulmonary medicine, nephrology, rheumatology, endocrinology, infectious diseases and plastic surgery included in "other specialties"

Source of staffing standards:

- 1993 Study data from Group Health Cooperative of Puget Sound and 4 other large nonprofit staff model HMOs - NEJM 1993;328:148-152.
- 1983 Study data from 7 large, Kaiser System HMOs - JAMA 1989;261:1930-1934.
- 1970 Study data from 6 very large, closed-panel HMOs - JAMA 1972;219:1621-1626.